TESTING

FACULTY OF **HUMANITIES** / JOOP VAN STIGT

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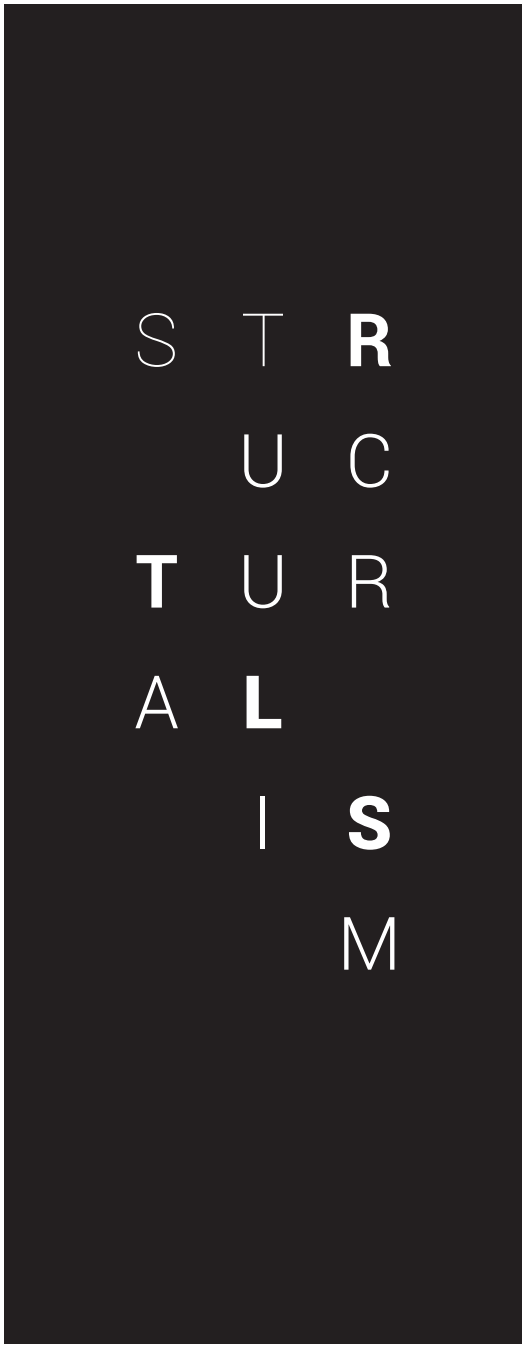

STRUCTURALISM

CONTENTS

INTRODUCTION

TESTING. / FACULTY OF HUMANITIES

The aim in this analysis is to understand the faculty of Humanities in Leiden. Through the research the aspects of Architectural Value, Cultural Value and the Building Technology within the faculty of Humanities are studied. We have chosen to base the research on our fascination related to time. The faculty of Humanities in Leiden undeniably plays part on the one hand in the oeuvre of Joop van Stigt and on the other hand it plays part in the legacy of Dutch structuralism. We want to take these two assets and place the faculty in the oeuvre of Van Stigt and relate this to the developments of structuralism. From there we want to find out which parts of the project belong to the personal intentions of the architect and what was realised in the final design. Finally how are all these parts related to structuralism and experienced. This translates to a question:

Where and how is structuralism visible and experienced in the Faculty of Humanities?

In order to find the answer to this question a number of sub questions are asked, each linked to a seperate research method and conclusion. These sub questions could be considered as chapters, contributing to a comprehensive report on our analysis.

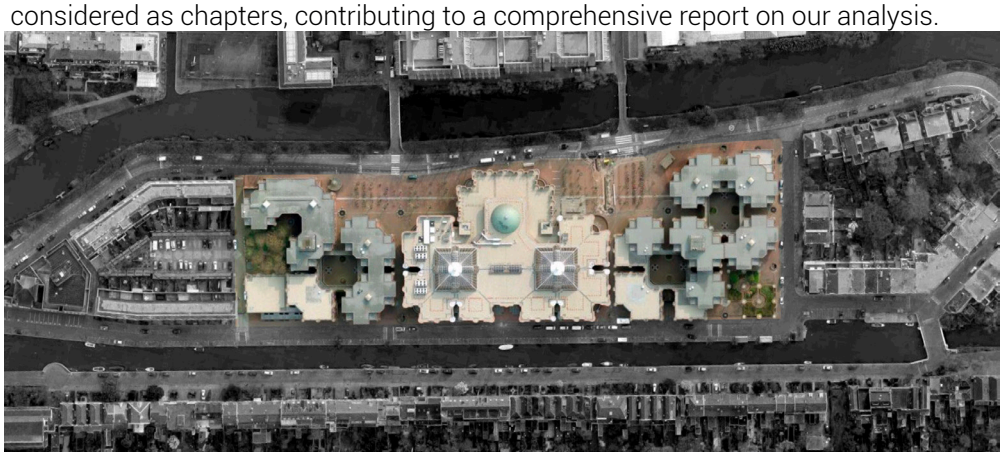


figure 1. Satelite image of faculty of Humanities

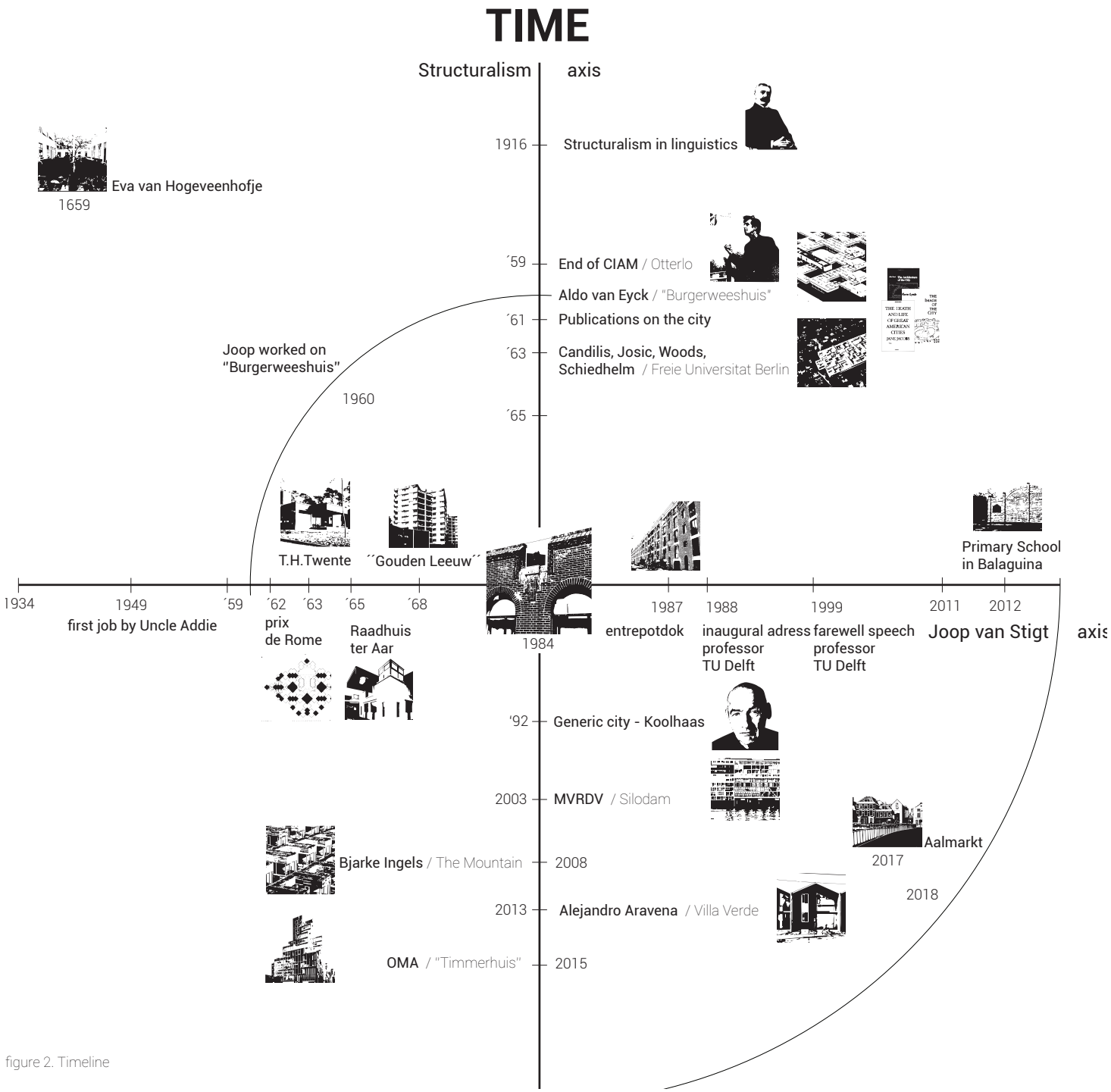


figure 2. Timeline

THEORETICAL FRAMEWORK

STRUCTURALISM. / Origin and development

City and Structure

Structuralism is first noted in the field of linguistics. The term is based on the works of Ferdinand de Saussure in 1916. He proposed that language can be seperated into two realms. The first one provides the structure, while the second is the performance of language. So each individual can, within the structure, use language to communicate in their own way. In anthropology the term is also used. Claude Levi-Strauss uses structuralism when he notices that among different cultures a common structure can be found, that within each culture is appropriated. Therefore, both in linguistics and anthropology structuralism is defined by a common structure, that enables different effects to be propageted.

In architecture however structuralism cannot be seen till the 1960's. The prelude to this architectural style can be found in 1953 when a group of young architects formed Team10. Later, at the Otterlo CIAM congress in 1959, Team10 declared the death of CIAM, leading to a break with CIAM and the emergence of new architectural styles as Brutalism and Structuralism. The work of Piet Blom that Aldo van Eyck presented in an article in Forum7 reflects the aspiration of modern architecture interwoven like an African Kasbah village. In addition to this Kasbah living, structuralism was influenced by Dogon society in Mali, in these villages buildings are not individual. But all buildings contribute to a public whole. Again, this fascination for African societies is shared with other paradigms in sociology and anthropology.

The term structuralism was only later contributed to the work of this select group of architects. Often associated with architecture consisting of a multiplication of elements or units.

figure 4. Dogon village in Mali

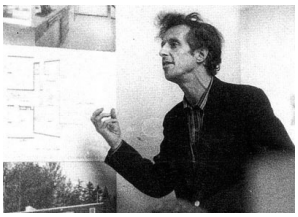


figure 3. Aldo van Eyck at CIAM 1959

figure 5. F. de Saussure

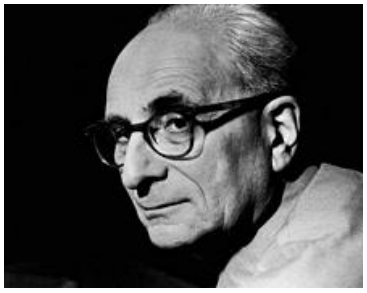


figure 6. C. Levi-Strauss

However, it would be blunt to state that all architecture that uses units within a structure is regarded as structuralism. Based on the work of structuralist architects it becomes clear that *social interaction*, and *open ended* structure is far more important than the units themselves. The focus within this group of architect differs. Some focus more on the modularity of elements, while others focus more on social cohesion through an architectural framework. Herman Hertzberger defines structuralism as *"an unchanging, extendable structure that can accept and enable local changes and infill."*

The definition of Hertzberger leads to the image of a city, because in cities the structure of streets and squares remains rather contant throughout history, while individual buildings can change drastically. Therefore this is one of the concepts proclaimed by structuralist architects. It is the reappropriation of the city, and develloping these ideas on the scale of a single building. This is most notably done by Aldo van Eyck, Piet Blom and Herman Hertzberger in the Netherlands. Although again, these architects differ in the execution of this concept. For Piet Blom for instance, many single entities combine in one 'building as a city', while for Hertzberger the building itself is seen as a city. Thereby structuralism shows different elaborations, with different aspects, this will be further explored in the next chapter.

Our hypothesis is that the concept of 'building as a city' within structuralism is most profound within the work of Joop van Stigt and this concept is therefore regarded as the basis for this analysis.

STRUCTURALISM. / Origin and development

The fascination for the city within the realm of Dutch structuralism is not detached from developments in the rest of the world. On the contrary, this tendency is strongly related to the *Zeitgeist* from that era. The newfound fascination in regard to cities developed as a reaction on the cityplanning as broadcast by CIAM. CIAM proposed the partitioning of cities in four separated functions defined as dwelling, working, recreation and circulation, which resulted in monotonous cityscapes. As a result this led to a re-evaluation of the historic cities among architects and social critics. The re-evealuation is brought forward by numerous publications, of which most notably *the architecture of the city* by Italian architect Aldo Rossi, *the death and life of great American cities* by American activist Jane Jacobs and *the image of the city* by American planner Kevin Lynch. All these publications focus on the appreciation and experience of the city and are published within a few years from each other. Jane Jacobs for instance advocated a more diverse mix of functions in the American cities, which in turn should lead to lively streets. While Rossi assumes the city to be architecture, and should be studied as a construction over time, criticising functionalist architecture simultaniously. Kevin Lynch is more concerned with the experience of the city and the sequences of space, which he defines by the term *wayfinding*.

This shift towards thinking about cities in structuralism leads to the image of the building as a city, because cities provide social and lively atmosphere. The first step to built a building as a city is seen on a small scale in the Burgerweeshuis by Aldo van Eyck. However, this building is fixed in its finished form and not *open ended*. Therefore, the first modular building as a city was created in Berlin by architects Candilis-Josic-Woods in 1963. The Freie Universität in Berlin was designed as a multilevel city, with streets and squares connecting them.

As a teacher of not only structurlist architects as Herman Hertzberger and Piet Blom, Van Eyck also taught Joop van Stigt at the Acadamy of Architecture in Amsterdam. Van Stigt in addition worked at the firm of Van Eyck most notably on the project of the Burgerweeshuis. This, next to other influences, arguably had great impact on Van Stigts' work.

As with many ideologies, a reaction is inevitable. This can also be seen in the last decade of the 20th century. For instance in *The generic city*, as published by Rem Koolhaas is his book *S M L XL*. He states that generic buildings, without character, are liberating from the rules of historic city centres. A clear schism with the identity driven architecture of the '70s and '80s. Today there is again a somewhat society driven tendency within architecture. The buildings from the '70s are in need of renovation. Even architects as Koolhaas are making more specific buildings. This will be further explored in the last part of this analysis. It is clear that the *Zeitgeist* changes and different era's can be appreciated.

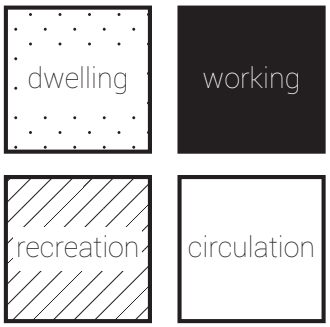


figure 7. CIAM / four functions

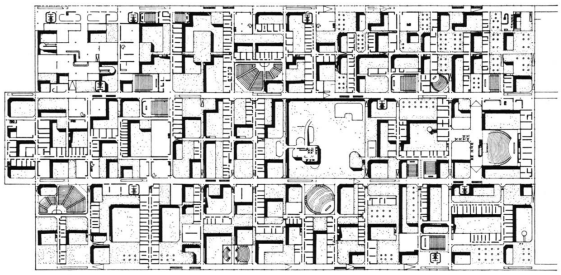


figure 8. Freie Unversität Berlin 1963

THEORETICAL FRAMEWORK

STRUCTURALISM. / Case studies

As seen in the theoretical framework structuralism in architecture has its roots in Dutch modernist architecture. However, a clear and consistent definition is not given, because the term is attributed to a certain group of architects years after their work was finished. The definition given by Herman Hertzberger in the previous chapter clearly shows a certain focus on open ended structures which can be expanded and appropriated. This definition is not always clear in the work of different structuralist architects. In order to get a clear view of what structuralism is and what it represents the work of several architects that are considered structuralists should be studied.

Therefore our former analysis is helpful to reference within this research. To come to a more precise knowledge of structuralism in this former research we studied different cases by structuralist architects. Together these cases give a broader view of structuralist ideas and the concequenses thereof. Cases included the Cube houses by Piet Blom, the townhall in Ter Aar by Joop van Stigt, the orphanage by Aldo van Eyck, 't Karregat by Frank van Klingeren and finally Vredenburg by Herman Hertzberger.

In the next pages found aspects of structuralism are summarised and listed to form as a basis for the remaining of this research. In this the case of the townhall in Ter Aar is not taken into account, because this analysis will elaborate upon this project later on when considering the work of Van Stigt.

STRUCTURALISM. / Case studies

Piet Blom / Cube houses

Piet Blom advocates to create buildings within cities that are more social and mirror village living. This is connected to structuralist ideas. Bloms' cube houses display these structuralist ideas in three ways:

One building is constructed using multiple elements or units. In this case units are constructed as single dwellings who together contribute to a forrest of houses. Units could in the design process easily be added or removed from the ensemble, thereby the projects seems to be open ended. However when constructed, all houses form one building, fixing the building in its form.
The units in addition give the project a more human scale, because the projects consist of multiple smaller units rather than one large building block.
Finally the cube houses act as a framework for social interaction. Underneath the cube houses is a social space, that has a visual relation with the dwellings above.

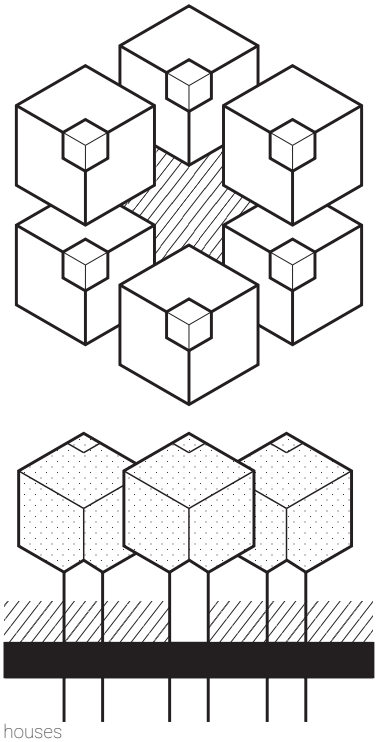


figure 9. Cube houses

Aldo van Eyck / Orphanage

While Van Eyck helped devellop Team10 and stood at the cradle of structuralism in architecture, his orphanage could arguably be considered as a structuralist building. At least the building is a step towards Dutch structuralism in architecture. Indeed, the building shows some structuralist aspects, for example:

The orphanage displays a more human scale in relationship to modernist architecture idiom. This is done by dividing the building into multiple smaller ensembles, or units. These units are in their turn connected by an inner 'street' and courtyards. These architectural components resemble the idea of a building as a city. Lastly the units are constructed from standardized elements, together constructing the building which seems to illustrate that the building is open ended. However when more closely examined, the building is rather specific and does not lend itself as an open ended structure.

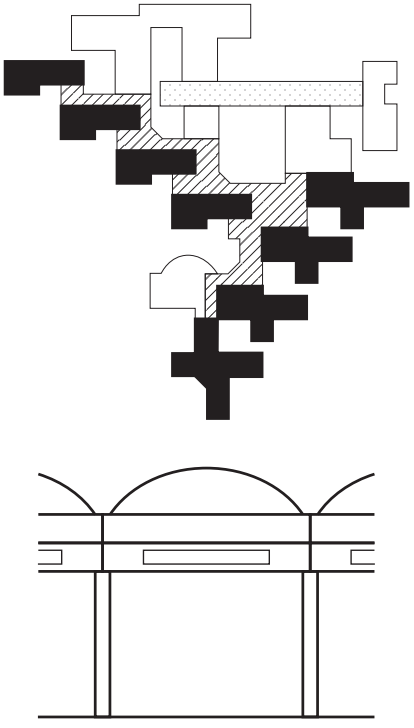


figure 10. Orphanage

STRUCTURALISM. / Case studies

Frank van Klingeren / 't Karregat

't Karregat in Eindhoven was built as a single roof to house several distinct functions. Van Klingeren did not regard himself as a structuralist, or even as an architect. Still his building displays some structuralist ideas:

The roofstructure of 't Karregat functions as a framework for social interaction. 't Karregat is designed to create conflict between users and therefore - in a way - encourages social interaction. Moreover, the structure is open ended, meaning there is room for expansion and underneath the roofstructure the empty enclosed spaces encourages users to interpretate the building and transform it to their own needs.

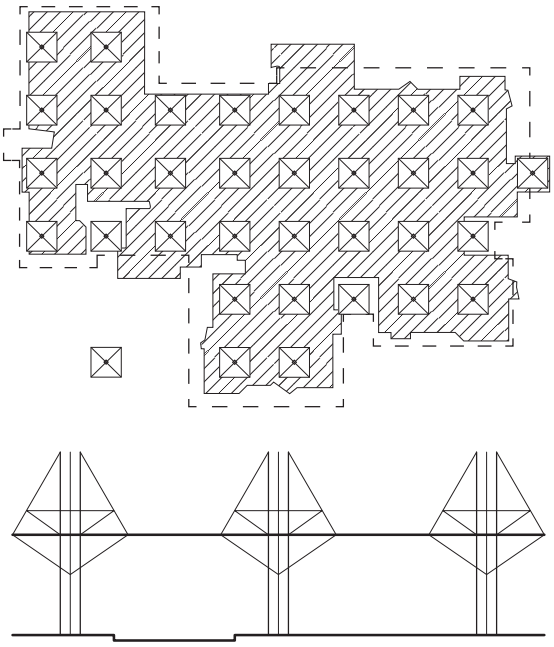


figure 11. 't Karregat

Herman Hertzberger / Vredenburg

Central in the work of Herman Hertzberger as seen through the case of Vredenburg is firstly equality for all users. In contrast to other theatres Vredenburg is less hierarchal and provides a good experience for all visitors.
In addition the building has multiple entrances and is part of the shopping centre Hoog Catherijne. It therefore blends together with the surrounding city, even emphasized by the presence of inner 'streets' and shops.

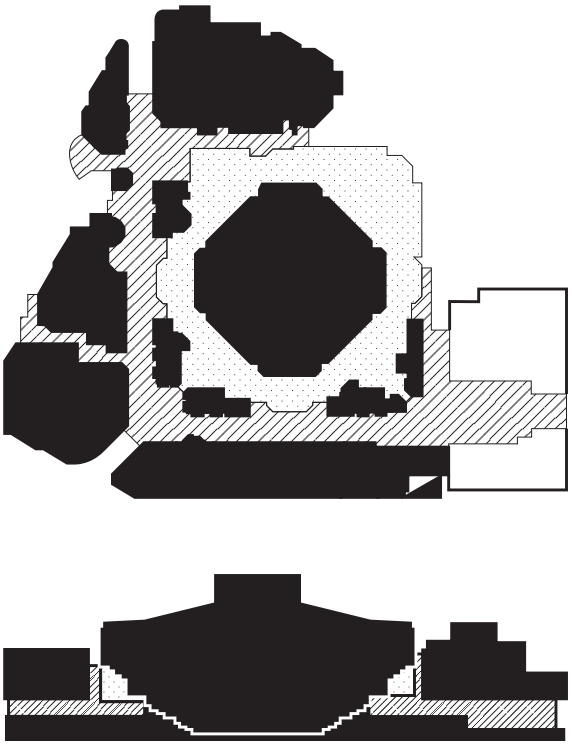


figure 12. Vredenburg

STRUCTURALISM. / Evaluation

When considering the theoretical framework and the four cases as researched in the former analysis, a number of structurlist core principles become appartent:

1. Units: Many structuralist buildings consist of a number of components or units. These units are multiplied to construct the entirety of the building. This in its turn provides a more human scale to an otherwise large building.

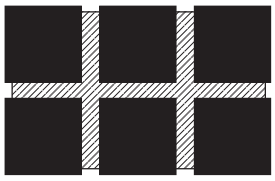


figure 13. Units

2. Open ended: Firstly the design leaves room within the building for the users to appropriate the space. Secondly the structure of the building allows extension when the buildings needs to be expanded.

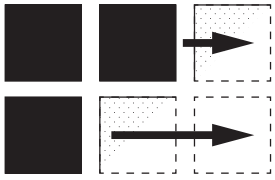


figure 14. Open ended

3. Building as a city: Many structuralist buildings create a building as a city, using streets and squares to provide circulation in the building.

figure 15. Building as a city

4. Social interaction: The aim for incorporating a human scale, the building as a city and room for interpretation leads to more social interaction within the building and a less individualistic building. This could be taken as the ultimate goal of structuralist architecture, of which the former aspects are tools to achieve this goal.

figure 16. Social interaction

Joop van Stigt

JOOP VAN STIGT. / Introduction

Having an understanding of structuralism through the theoretical framework and the case studies from Blom, Van Eyck, Van Klingeren and Hertzberger it is valuable to consider the work of Joop van Stigt himself. This not only provides us with an understanding of Van Stigts' work, but moreover makes us able to compare this knowledge to the context of structuralism. The sub question central in this chapter is:

How did Joop van Stigts' work develop towards the faculty of Humanities?

This research is done through studying the different projects done by Van Stigt, based on literary sources. Furthermore, by a comparative research on floor plans and facades the work can be compared and a devellopment can be extracted.

figure 17. Joop van Stigt

JOOP VAN STIGT. / Floor plans

The foundation

Joop van Stigt was born in 1934 and grew up in Amsterdam in the area of the expansion plan by Berlage and near the open-air school from Duiker. This environment made him enthusiastic for architecture. From a young age he wanted to learn the profession from below. This is characteristic in the way of working of Joop van Stigt throughout his career. He thinks that the basic knowledge of technique and the making is essential for designing. Besides his early job and evening classes he first worked in the office Bodon from the threesome Bodon, Salomonson and Waterman. During this internship he got in touch with Aldo van Eyck and Herman Haan. Those men introduced him with the Dogon culture which is a big inspiration source in his oeuvre. Together with his background in the functionalist way of thinking he built with primary constructions and honoust material. Joop van Stigt explains this by saying that the dogon culture is able to coordinate all matters of life with each other in an exeptionally harmonious way.[1]

The Dogon home is originated from a system of people and space. The dimensions are inspired by the human measurements. The Dogon home has a central space surrounded by sleeping-rooms and kitchen. All of his future projects are derived from this sizes 5,4 m and 7,2 m. The central space with adjacent functions is also a scheme that van Stigt used in his projects. He always wanted to create an efficient use of space and wanted to limit the access space.The access to the private rooms is most of the time collective route through the building.

Student work

During his study he used a more functionlist style of designing but gradually he develops a more structuralist approach. Of course when you have Aldo van Eyck as professor and also starting to work with him it will be reflected in your work. In his project for student homes in 1959 he uses the brick as a building component and makes housing modules out of it. He combines the bricks in their full width and divides them in half. Then he makes a vertical connection to create one house type. When he decides to participate with the Prix de Rome in 1962 he makes a range of squares. Within the bigger squares he divides the space in smaller squares with the service spaces at the edges. The space that remains is the communal sleeping area.

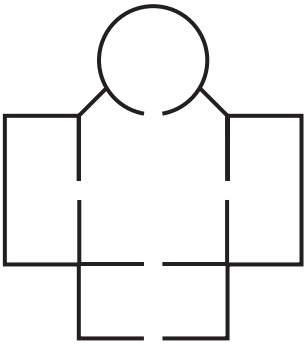


figure 18. Dogon Home

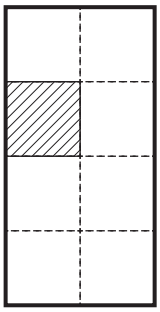


figure 19. Student homes 1959

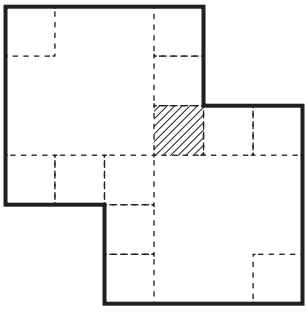


figure 20. Prix de Rome 1962

Access

JOOP VAN STIGT. / Floor plans

Office work

After van Stigt did the Prix de Rome he earned his first assignment at the T.H.Twente and started his office. The canteen consists of a subdivision of squares. This canteen is a public building so the entire space is collective space. He only had to place the furniture and service spaces like kitchen and toilets. A few of them are placed to define the walking route and the others are placed within the squares or along the edges.

When he worked on the town hall in Ter Aar he had the freedom to design on an empty plot. The building had to get a certain ceremonial appearance.
He uses therefore a central reception point. From there you can make your way to the office spaces. The service spaces are placed in the corner of the bigger square shaped clusters. In the roof he uses overhangs to give direction to the polder landscape around the building. In the later transformation they placed three new clusters joining the existing ones. They follow the same dimensions and pattern but are newer versions of the old ones.

Just before he started on the faculty in Leiden he did the "Gouden Leeuw". A flat in the Bijlmer. He refused to make a gallery flat. In the center of the building he placed the vertical access to individual homes. On each floor there are four houses situated around this core. Each home is again divided into four squares and two are used for living room and kitchen and the rest for sleeping and service. There is no separation between these spaces through a corridor but he uses only one small square to make the separation. This is a minimal loss of functional space. We see this solution coming back in the Faculty of Humanities.

In the Faculty of Humanities van Stigt had to take the urban fabric into account. The access space in this building is therefore more dominant. He connects the inner courtyards with the entrances of each building cluster. From there he organises the functions like earlier project around this central space just like the Dogon home mentioned in the beginning. During the design process we see a lot of variations within these two squares. The placement of the interior walls doesn't seem to be important but have to follow the system. This is the most important thing we could take from his work. A collection of squares is defined as the system and within this system he defines acces and program.

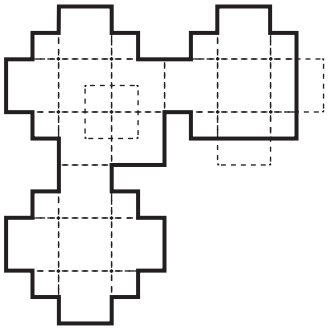


figure 21. T.H. Twente canteen 1963

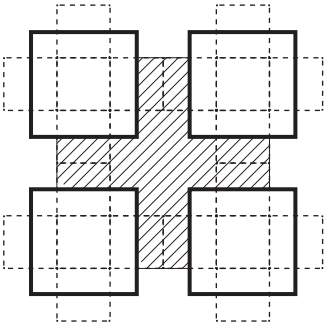


figure 22. Town hall Ter Aar 1965

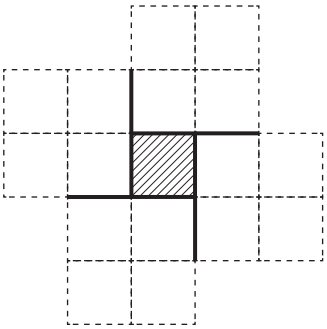


figure 23. Bijlmer flat "Gouden Leeuw" 1968

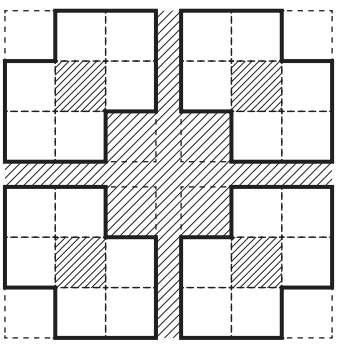


figure 24. Faculty of Humanities 1983

Access

JOOP VAN STIGT. / Facades

Development of the facade

Throughout the oeuvre of Joop van Stigt we can see the theme of interlocking squares. In the Faculty of Humanities Joop van Stigt continued this method on a bigger scale. When we compare the design of the floorplans to the design of the facades we see progressive development. During his study he has a functionalist style in the facade. The facade represents the separations of functions and let the programme come forward. In the student homes in 1959 you see that the housing units together become the facade. In the Prix de Rome he takes preference for displaying the structure of the floorplan in the facade, rather than the function of the building. Almost as if the load-bearing elements are extruded and only openings are made when necessary. In Ter Aar he made a clear division between the programme and the roof. Also he uses different materials to make a distinction in the layers of the building. The material properties dictate the composition of the facade. In the Faculty of Humanities he continued this clear distinction of the base and the roof level. The roof is very similiar with Ter Aar but the base has multiple references to the urban context.

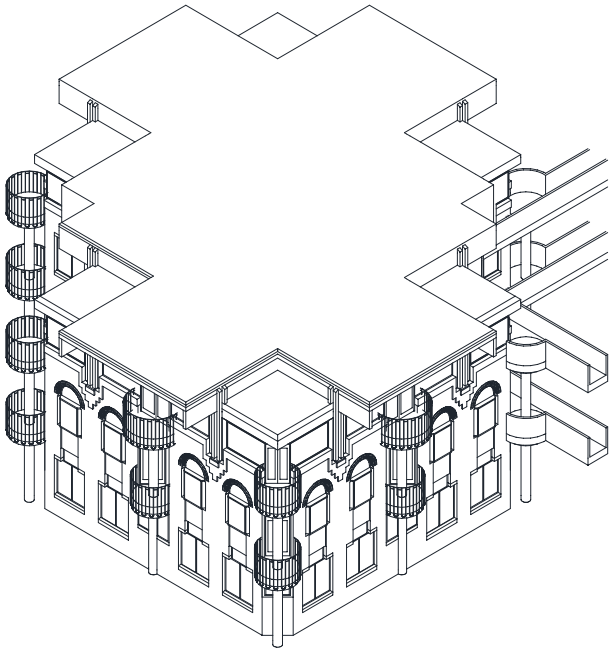


figure 28. Faculty of Humanities 1983

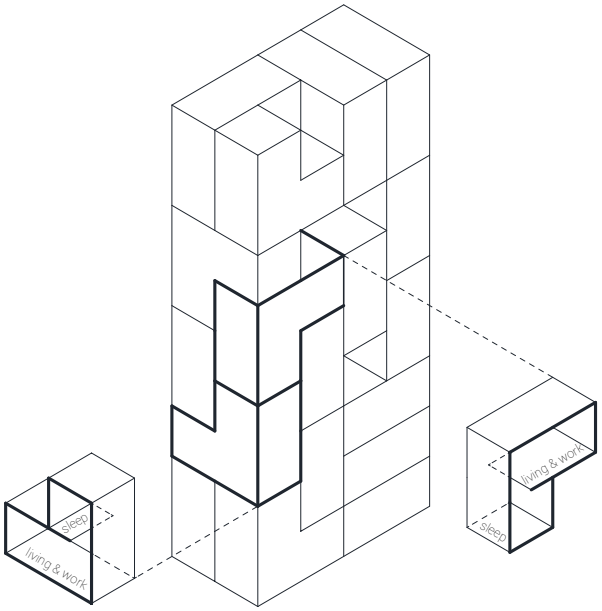


figure 25. Student homes 1959

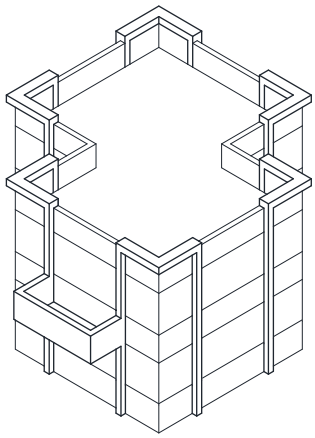


figure 26. Prix de Rome 1962

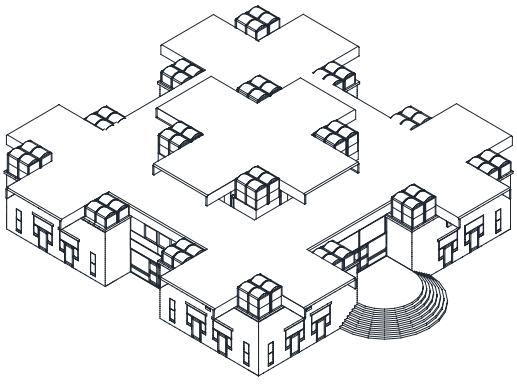


figure 27. Town hall Ter Aar 1965

JOOP VAN STIGT. / Facades

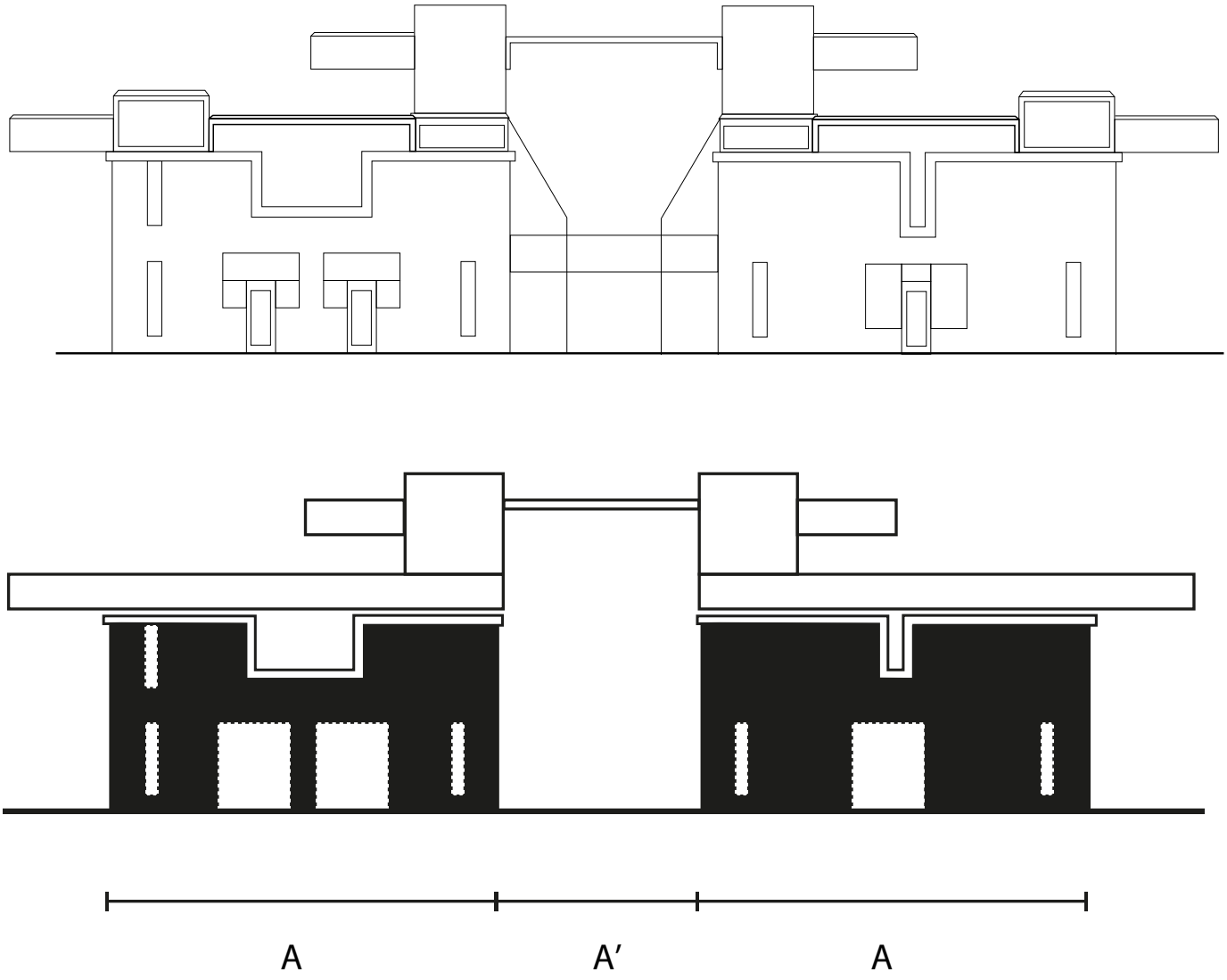


figure 29. Huis Ter Aar

JOOP VAN STIGT. / Facades

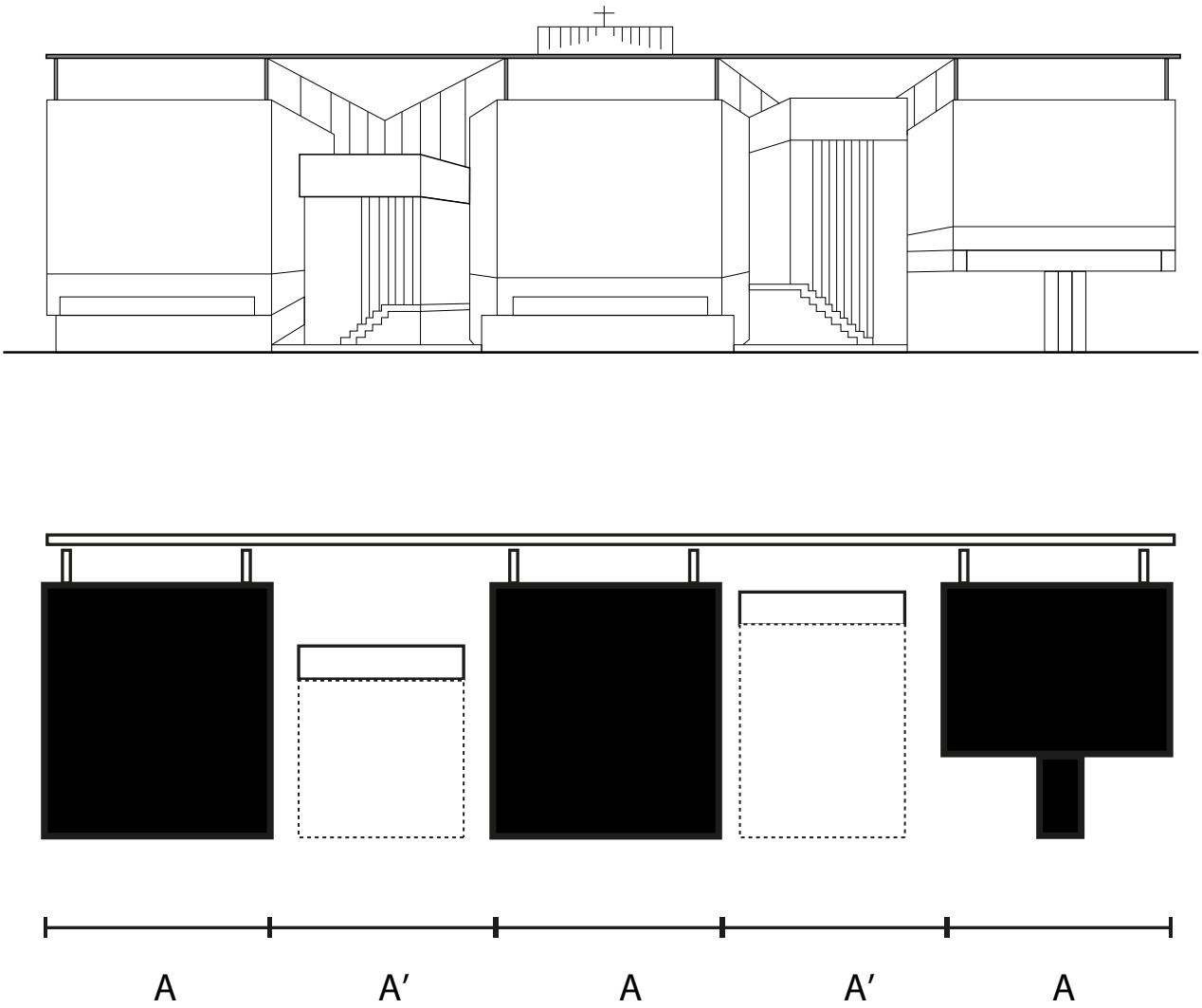
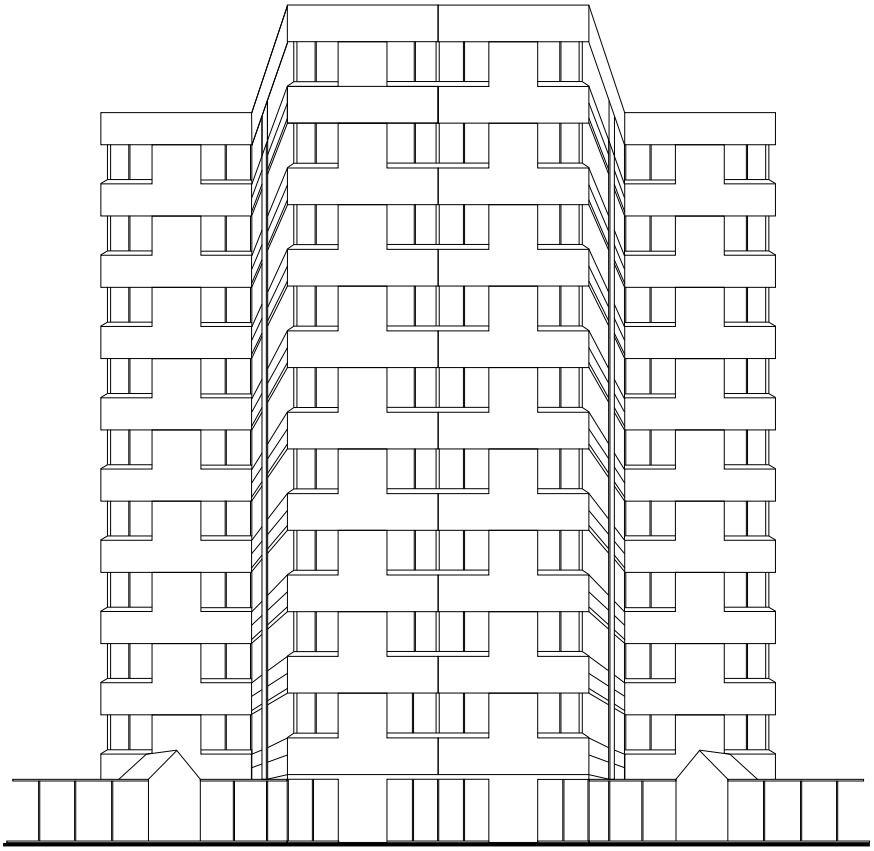


figure 30. Afrikahuis

JOOP VAN STIGT. / Facades



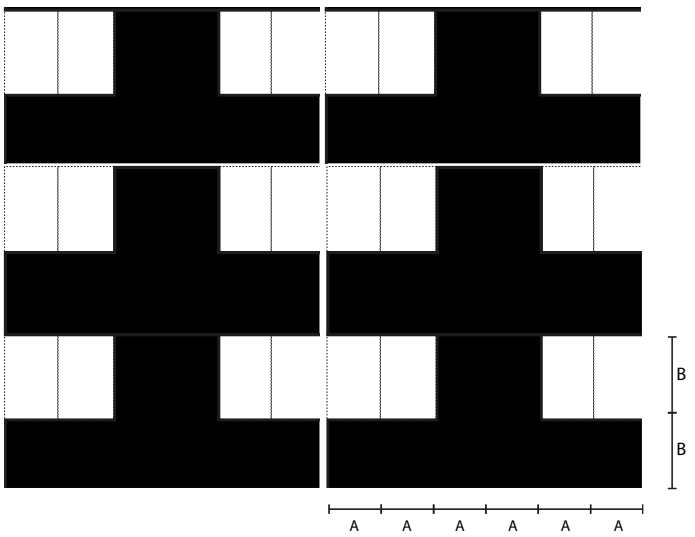


figure 31. Gouden Leeuw

JOOP VAN STIGT. / Facades

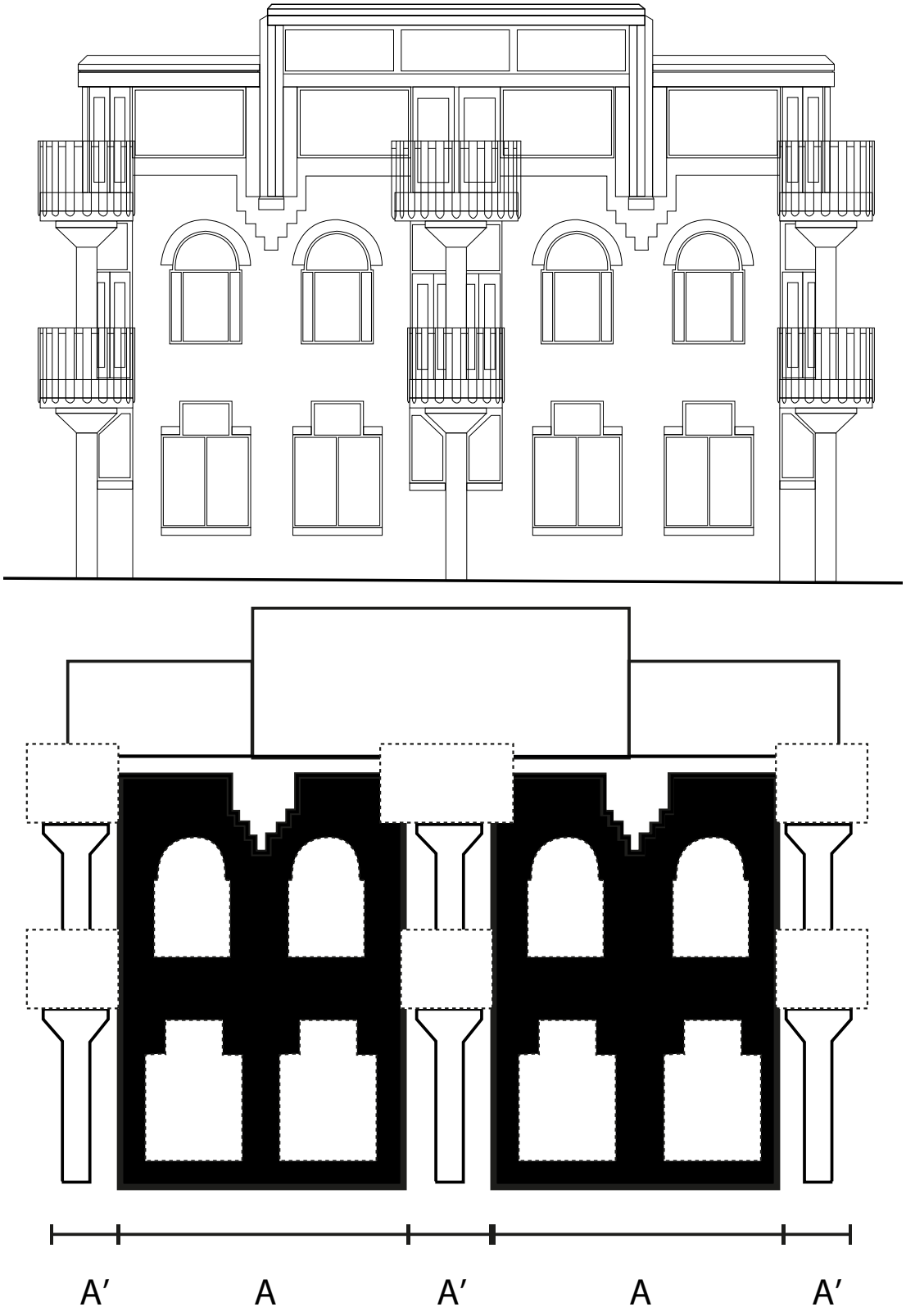


figure 32. Faculty of Humanities 1983

JOOP VAN STIGT. / Facades

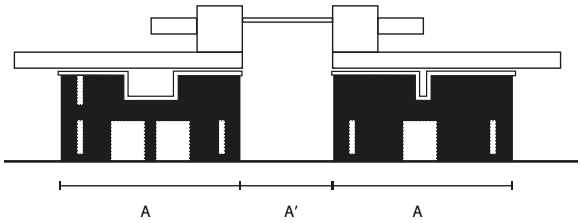


figure 33. Townhall ter Aar

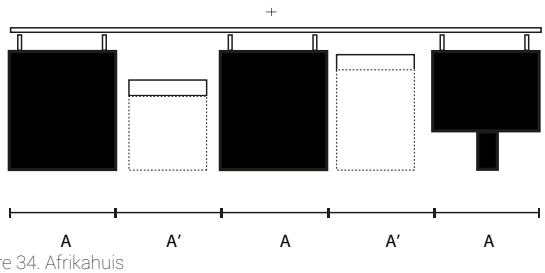


figure 34. Afrikahuis

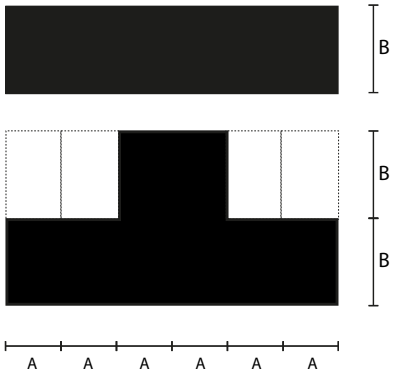


figure 35. the Gouden Leeuw

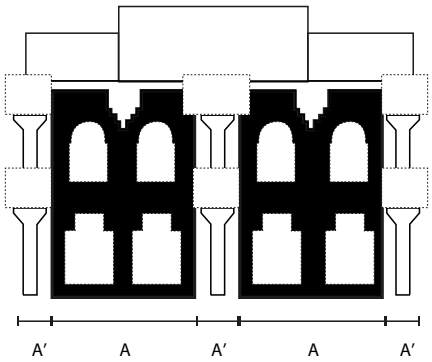


figure 36. Faculty of Humanities

Evaluation Façade structures

The expression of the facades is diagrammised in the figures on the left. The schemes are in chronological order.

The facade of townhall Ter Aar can be divided in three main parts on the front view:
The two building parts flank the central reception area. The middle zone is from where the circulation of the building is organised. On top of the solid loadbearing walls, a wooden roof is added.
These elements are also visible in the design for the "Afrikahuis". In this façade, the building contains three closed elements with a light glass element inbetween. Also the same wooden roof elements are reinterpreted for Afrikahuis.
Both buildings are made out of limestone. However, the limestone is loadbearing for the construction of huis Ter Aar and in the case of the Afrikahuis the contruction is made out of concrete.

In the facade of the Gouden Leeuw and Groenhoven the use of concrete is clearly visible as a building element. As visible in the facade, this element is repeated through the whole facade and enclosed with the roof made within the same concrete structure. Once again the structure of the floorplan results in the elevation form.

The facade of the faculty of Humanities is in contrast to the design of his previous design projects. While he implemented characteristic roof details, like he did in huis Ter Aar, the facades themselves display more variety in ornamentation. The facade is only partially used as a constructive element, because it bears the load for the wooden roof construction.
By placing the column in the middle of the facade, Joop van Stigt breaks the facades into units measuring 7,2 metres. Most notably however, in contrast to the previous design projects, Van Stigt uses brick for the materialisation of the facades.

JOOP VAN STIGT. / Evaluation

Floor plan and Facade

As a conclusion in Joop van Stigts' work we could see a specific way of developing the floor plan and facades. He strongly designs his buildings from the urban tissue and searches for connections where the people could acces the building. He wanted to bring the city inside the building and therefore used the existing paths in the city to connect with the structure. In the Faculty of Leiden we think that this is one of the most obvious examples where you can see this approach.

He didn't want to design buildings that could be entered straight away. Rather, Van Stigt provided a transition zone bordering the public and private space. In the Faculty of Humanities he uses two public squares to receive the people and lead them to the courtyard. From there you can enter the building itself and you arrive in a collective space that is surrounded by the private rooms.

This, together with the construction of the building normally results in the actual facade. In this case the construction contains columns and free floor fields so he had to design the facades in addition to the structure so that it suits the urban context. This results in one of the few brick facades made by Joop van Stigt.

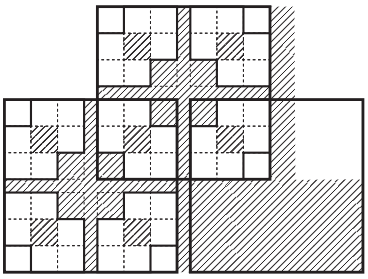


figure 37. Floor plan system

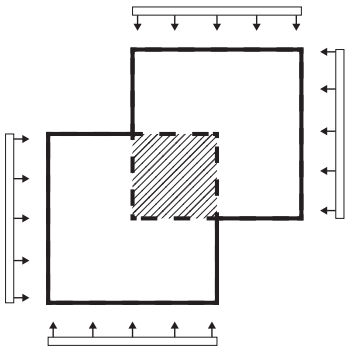


figure 38. Facade design order

Access

TRANSITION

NOLLI MAP. / City scale

The faculty of Humanities in Leiden consist of two ensembles, contributing to a total of 13 buildings. These buildings, dubbed 'villas' by Van Stigt, create a number of squares, courtyards and alleyways. Therefore, the building is constructed in similarity to a city, consisting of different buildings. The organisation of public and private spaces in the faculty is somewhat blended. This raises the question:

How are public and private spaces related to one another in the faculty of Humanities, and is this related to how this is organised in the city centre of Leiden?

In order to find the answer to this question the Nolli map, as conceived by Giambattista Nolli, can help. This map does not show buildings and open spaces, rather it displays public and private spaces in the city. In contrast to the traditional Nolli map, the colours of this map are inverted. The act of inversing the colours not only helps to get grip on the drawing, it also further emphasizes the public- rather than the private space. The result further emphasizes not the private buildingblock in Leiden and the campus area, but rather the public spaces.

TRANSITION

NOLLI MAP. / City scale

figure 39. Nolli Map

Private space

Private space

Collective space

Water

MORPHOLOGY. / Building blocks

The historic part of the city centre is characterised by the rectangular closed city blocks and quite little collective space. Even more so because the collective area mostly consists of canals and open water. The building block follow the alignment of the streets quite strictly. Streets are sometimes enclosed by walls to separate gardens from street level. The existence of historic *hofjes,* or courtyards, in the closed historic housing blocks is also quite pronounced in this map. These courtyards are quite unique to Dutch culture and provided secluded living space for elderly people. Their secluded nature gives them a collective atmosphere while also being open to the public.

The campus area of the Leiden University is clearly recognisable in the Nolli map. Some faculty buildings follow the fabric of the historic city in their rectangular shape. However the central library and the faculty of humanities are more rounded creating public squares. The university buildings are also recognisable by the collective space within the buildings. The central library is an exception, because most of it is closed of by keycard gates.

The Hortus Botanicus area can also be clearly seen in the Nolli map as it provides the largest open public space in the city, closed off on the south by the iconic observatory.

Joop van Stigt in his design for the faculty of Humanities creates a sequence of squares and courtyards to dissolve the border between public and private spaces. From the city square in front of the building, one enters the courtyard and additionally enters the building through a collective hall to finally enter private rooms.

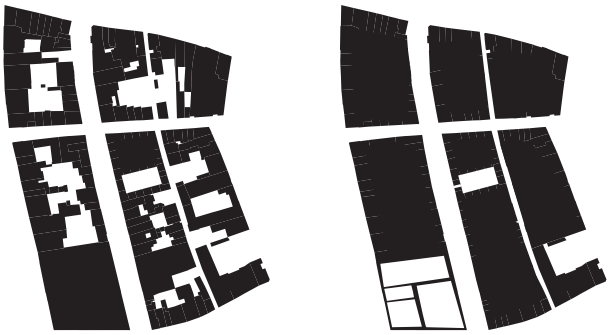


figure 40. Building blocks vs. Nolli map

figure 41. Leiden city centre vs. Faculty of Humanities

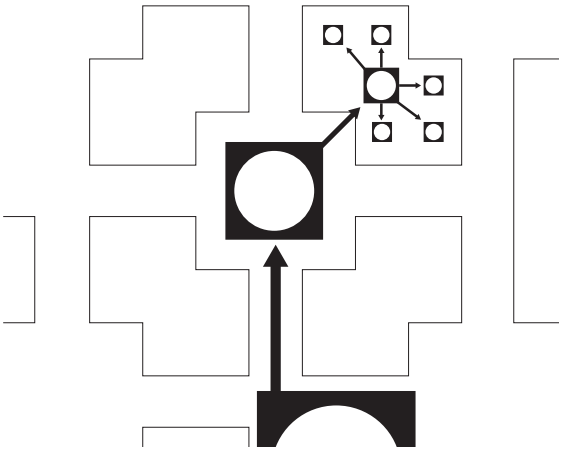


figure 42. Public to private in faculty of Humanities

CITY SCALE. / Intentions

Site

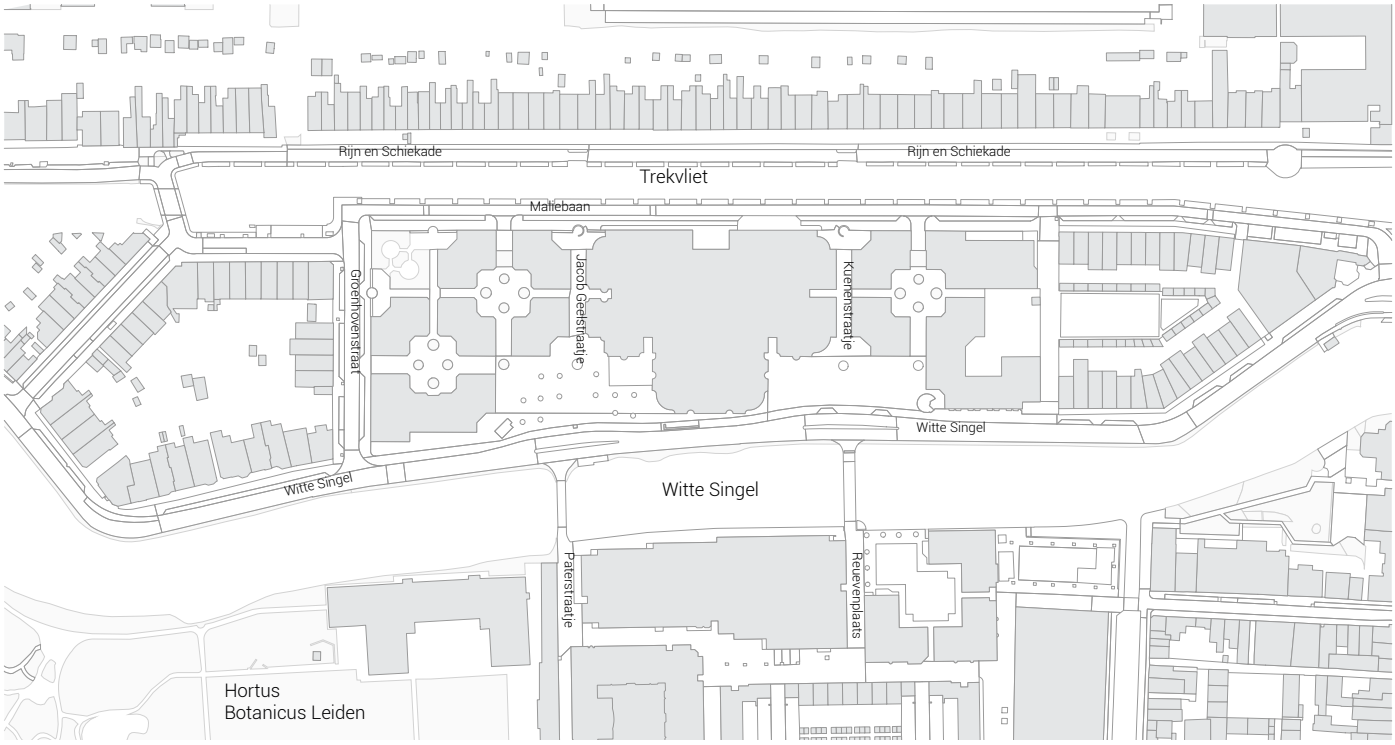


figure 43. City map of campus area

Connections with the city

Joop van Stigt had a clear vision about this area and convinced the other architects for placing the library in the middle, thereby creating two squares. The structure plan shows that Van Stigt anticipated two bridges spanning the Trekvliet for students to be able to cross to the Rijn en Schiekade. The building in this way becomes moderates the movement from the inner city to the suburb. In this case the Jacob Geelstraatje and Kuenenstraatje are like an alley as seen in the centre of Leiden. Alleys connecting main streets.

The two bridges are never realized. Therefore the intended connection was never established. Today people move parralell to the location rather than go through the buildings. Moreover, some of the intended passages are now closed off. The squares in front of the building have evolved as a terminus point, used to stall bikes, instead of a lively square connecting two parts of the city.

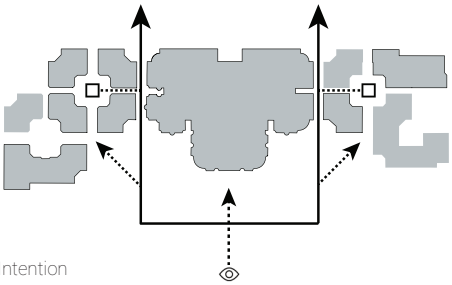


figure 44. Intention

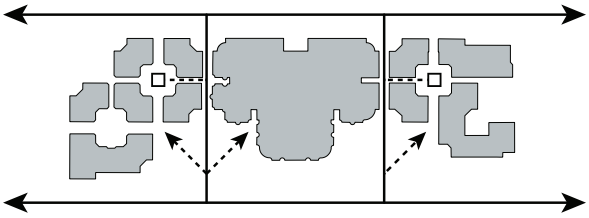


figure 45. Reality

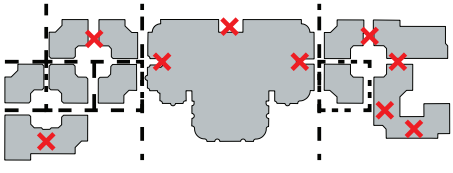


figure 46. Intentioned accesses that are now closed

MORPHOLOGY. / Evaluation

A large part of the city centre of Leiden has a rather closed character, because buildings enclose the streets. Next to that, the number of public squares in the city is rather low compared to other Dutch cities. In Leiden the public space is characterised by streets, alleyways and canals. Typical courtyards provide dwellers with some collective space. The campus area differs in this with the city centre. Because many buildings have a large collective space inside, easily accessible by the public. Especially the Hortus Botanicus stands out, because of the large public space.

Joop van Stigt had a clear idea on how to implement his building into the city. By creating a serie of squares and spaces, the border between the public open street is somewhat softened to allow visitors and students to enter the building.

However not all intended actions are functioning as they were planned. For instance the alleyways are not a muchused connection between the Trekvliet and the Witte Singel. Moreover, many of the alleyways are closed off by the slope of the parking garage, gates or even garbage containers.

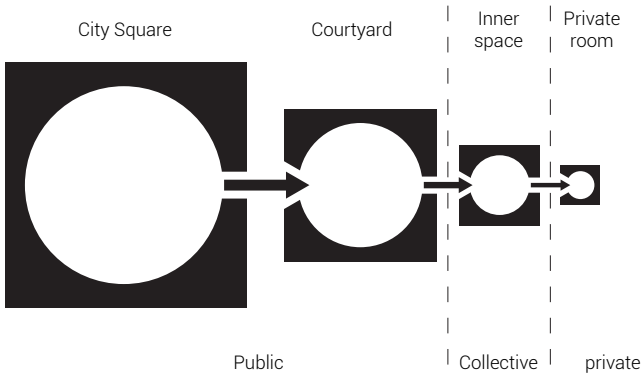


figure 47. Organisation of spaces in the faculty of Humanities

TRANSITION

SEQUENCE OF SPACE. / Cullen drawings

The inner city campus of Leiden is a large part of the city centre, and therefore has a great impact on the impact of the city. To study the experience of the city and the sequence of space through movement in the city, it is useful to use a method as coined by Gordon Cullen in his book *Townscape*.

Because the campus area is on the western side of the city, and most students approach the city from the east, the chosen spaces for this research are taken from the centre of Leiden, gradually moving toward the faculty of Humanities. Furthermore, Van Stigts' design brief aimed to create a connection to the city.

This analysis is done to understand the relationship between the spatial experience of the city and the faculty of Humanities. As a sub question for this part of the research applies:

How does the spatial experience of the faculty of Humanities compare to the experience of the city centre of Leiden?

A number of sixteen images is taken, sketched, processed and analysed in order to come to a conclusion. These images are taken within four slices to get a convincing image of the different parts in the city centre as well as the faculty of Humanities, with all their distinctive parts.

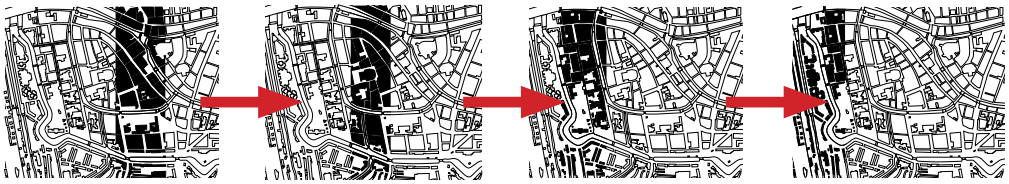
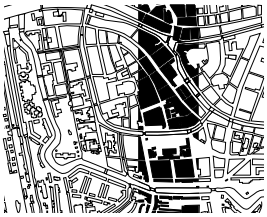


figure 48. path of taken images



SEQUENCE OF SPACE. / Cullen drawings

figure 49. City Centre slice I

1

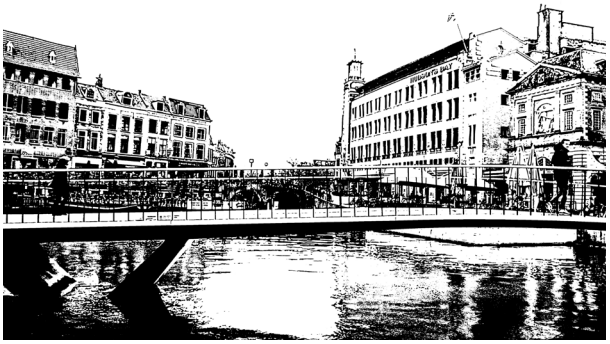


figure 50. Aalmarkt

2

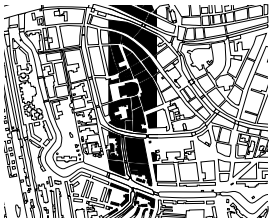
figure 51. Aalmarkt

3

figure 52. Mandenmakerssteeg

4

figure 53. Van der Werfpark



SEQUENCE OF SPACE. / Cullen drawings

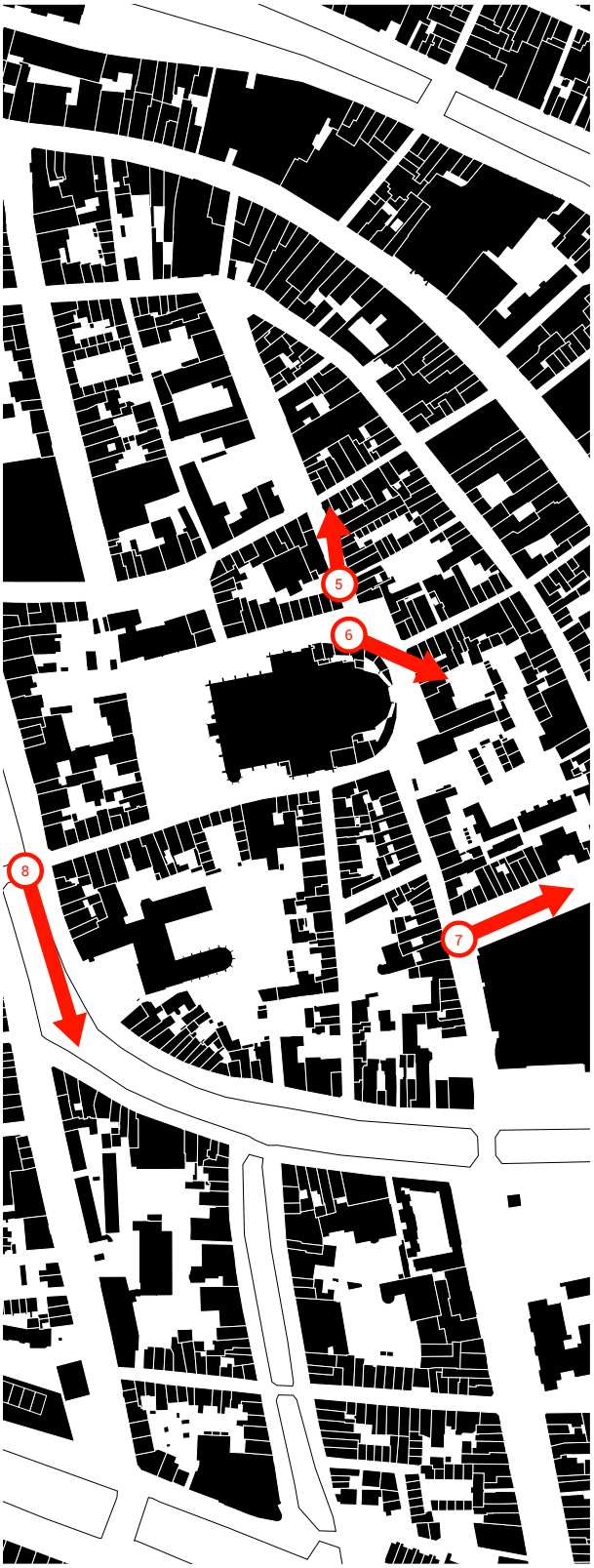


figure 54. City Centre slice II

5

figure 55. Pieterskerkstraat

6

figure 56. Pieterskerkhof

7

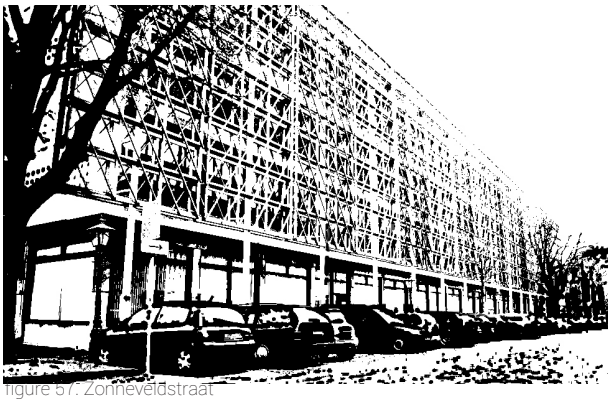
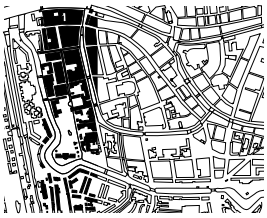


figure 57. Zonneveldstraat

8

figure 58. Rapenburg



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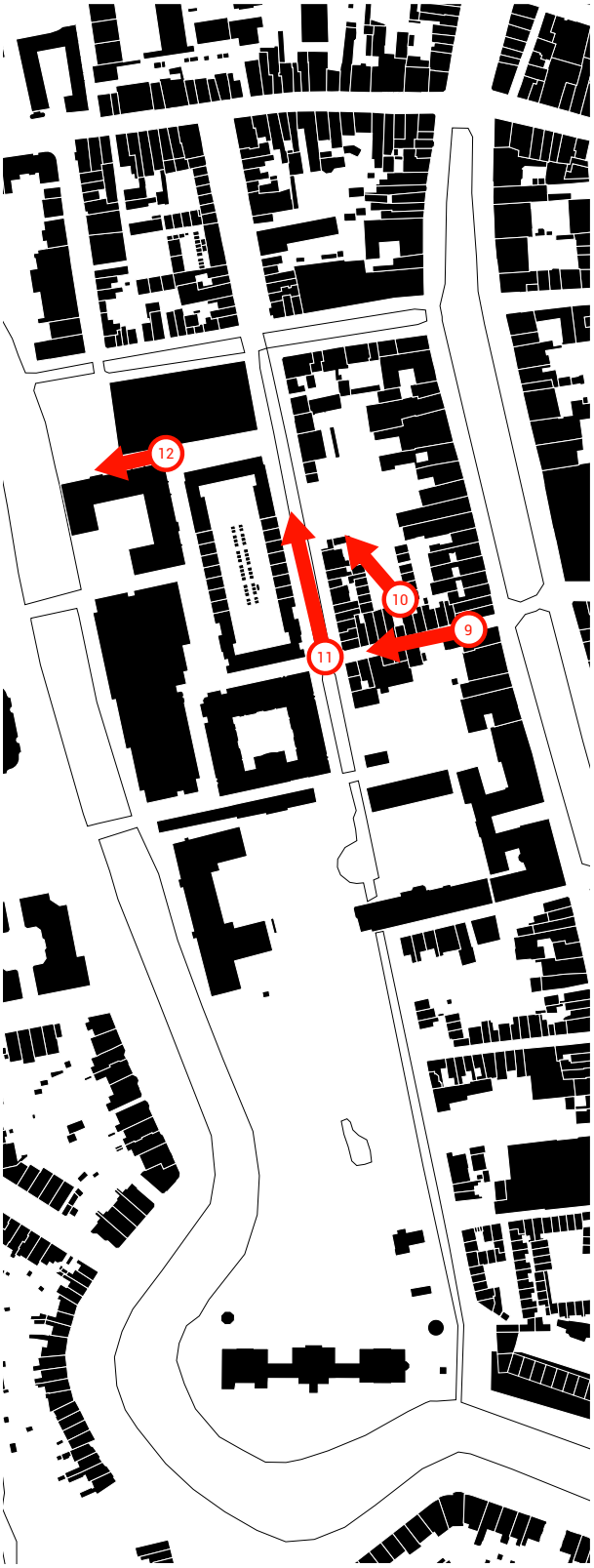


figure 59. City Centre slice III

9

figure 60. Eva van Hoogeveenhof

10

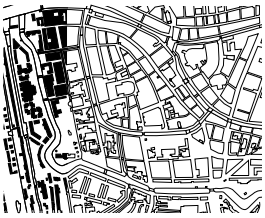
figure 61. Doelensteeg

11

figure 62. Arsenaalstraat

12

figure 63. Doelengracht



SEQUENCE OF SPACE. / Cullen drawings

figure 64. City Centre slice IV

13

figure 65. Maliebaan

14

figure 66. Jacob Geelstraatje

15

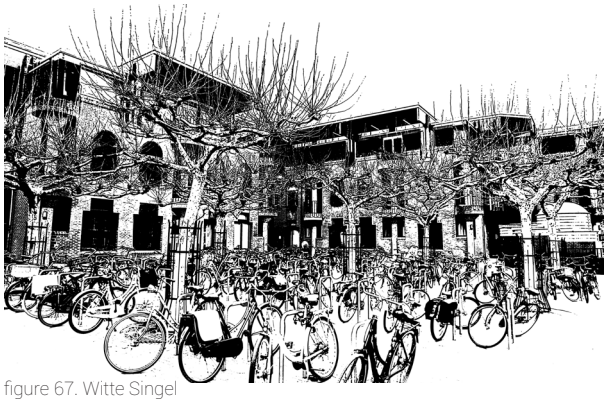


figure 67. Witte Singel

16

figure 68. Park at corner of Maliebaan and Groenhovenstraat

SEQUENCE OF SPACE. / Processing

figure 69. Processing of images

Sequence of space

When tracing the facades on the Cullen perspectives some aspects become apparent. Like in the research of Cullen, sometimes landmarks can help in *wayfinding* within the urban fabric. These can be towers, or iconic buildings, visible through vistas. This is also shown in vista througout canals, alleys and streets, where often a row of houses or facades are placed in sightline. Even when in a park, like in figure 4, these facades remain visible. In the faculty of Leiden this is shown in figure 14 where the Pieterskerk becomes visible when looking through the alley.

In addition the perimeter of buildings becomes apparant through these drawings. Building height, -shape or -function may vary, but all buildings show to follow the street alignment, and therefore leading the eye along their facades. The faculty in Leiden also follows this code, as seen in figures 13 and 14. The exception on this principle is shown in figure 15. Here the alignment is not that consistent leaving a jagged line of facades and enclosing the square. However it is done differently than in the square shown in figure 6.

SEQUENCE OF SPACE. / Evaluation

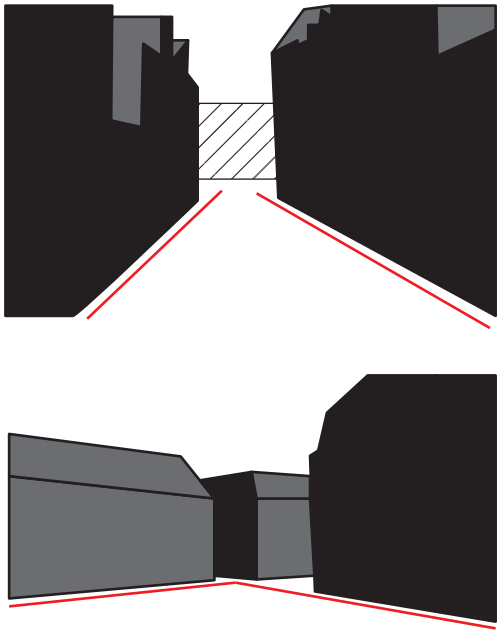


figure 70. City centre

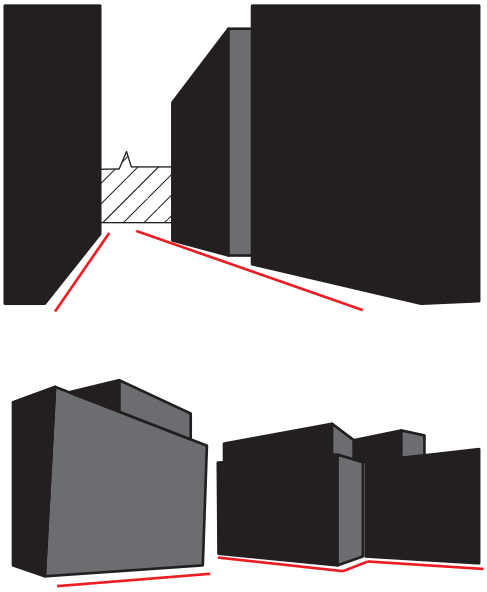


figure 71. Faculty of Humanities

Streets and squares in the city centre of Leiden are characterized by the strict allignment to to the street. Doors open directly to the street, creating a lively image. Often streets provide a vista on landmarks or buildings. Most recognizable are the different heights and shapes of the facades. Facades on a square also follow the alligment of the pavement, only interrupted by openings when access is given to alleyways.

At the faculty of Humanities in Leiden, alleyways are similar to alleyways in the centre following a strict alignment and providing a view on the city. However they differ because the facades surrounding these streets have the same height and roofline and do not provide access through doors. Squares are also rather different from squares in the centre of Leiden, they leave a jagged footprint.

CONTEXT

CONTEXT. / Introduction

At the site visits and from the excursion through the city context of the Leiden Humanities faculty, it became apparent that there were certain reinterpreted typological city space built into the design of the faculty campus. The square, the courtyard, the alleyway and the park are the four disticive urban typological spaces which were identified on the campus.
This context analysis aims to find out what is the transition or threshold between the public zones, collective zone and private zones in the urban profile of each example in the city of Leiden and then compare it with the similar example on the university campus.

The typological places selected to make the comparison are

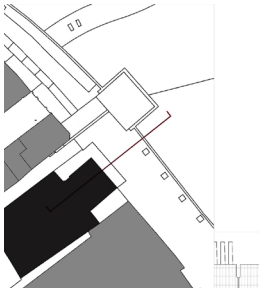
City	Humanities Faculty
SQUARE. / Aalmarkt	SQUARE. / Wittesingel (north cluster)
COURTYARD. / Eva van Hoogeveenhof	COURTYARD. / van Wijkplaats hof (south)
ALLEYWAY. / Kloksteeg	ALLEYWAY. / Jacob Geelstraatje
Park. / Plantsoen singel	PARK. / Cnr. Maliebaan & Groenhovenstraat

What is the threshold between the public space and the private space, what kind of interactions occur and therefore what is the threshold between the city and the buildings?

The method used to answer the question is an urbanism approach to investigate the two similar areas. Section, plan and elevation drawings of the same scale and size of each location were used as a tool for comparison. The street profile marks the relation between public, collective and private zones, the plan maps the material and thresholds and finally the composition and building heights are seen in the elevation. The exercise assisted to critically access if the architect succeed in creating the same quality in social interactions as well as understand how the architect built the campus as a continuation of the city.

CONTEXT

SQUARE. / Aalmarkt



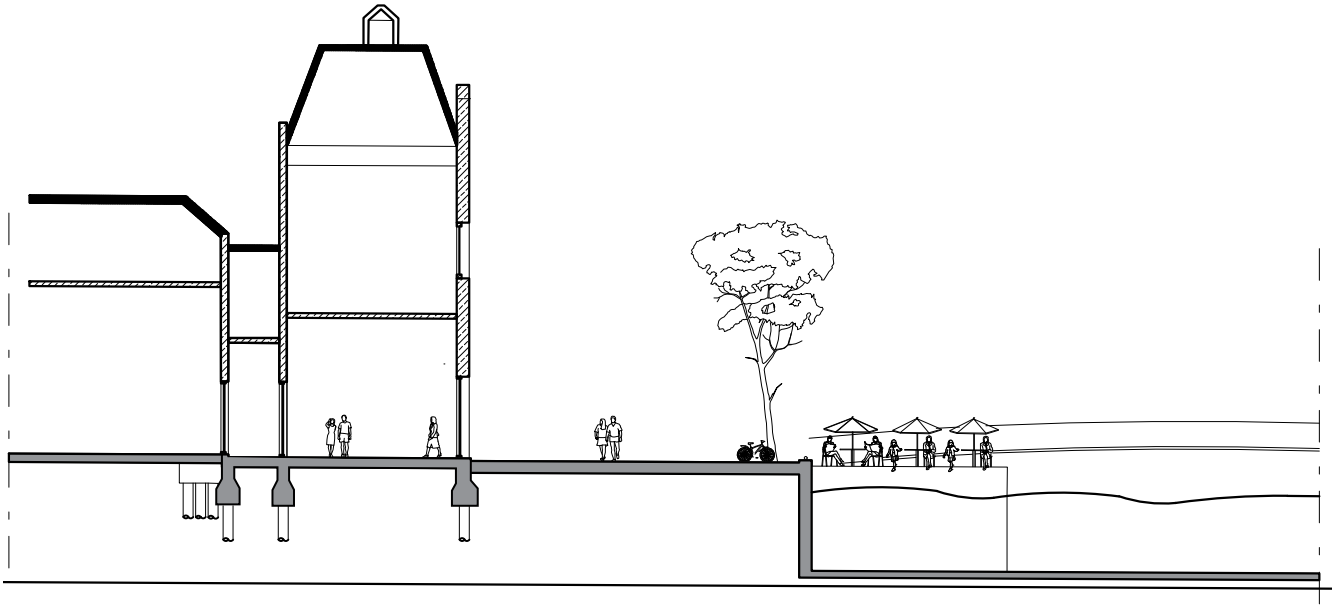


figure 72. Section through the square and surrounding buildings.
Scale 1:300

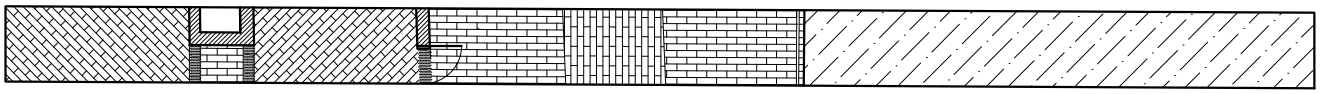


figure 73. Mapping of the materials in plan showing transition
from interior to exterior space

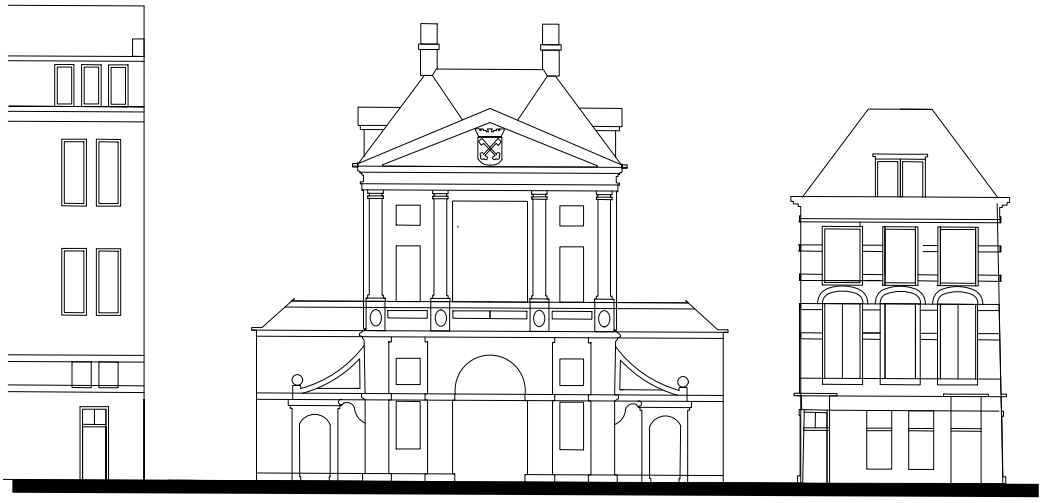
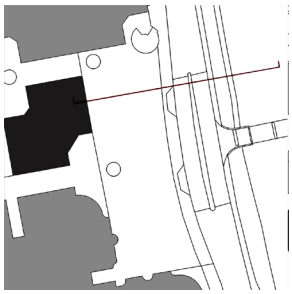


figure 74. Elevation of buildings onto the square
Scale 1:300



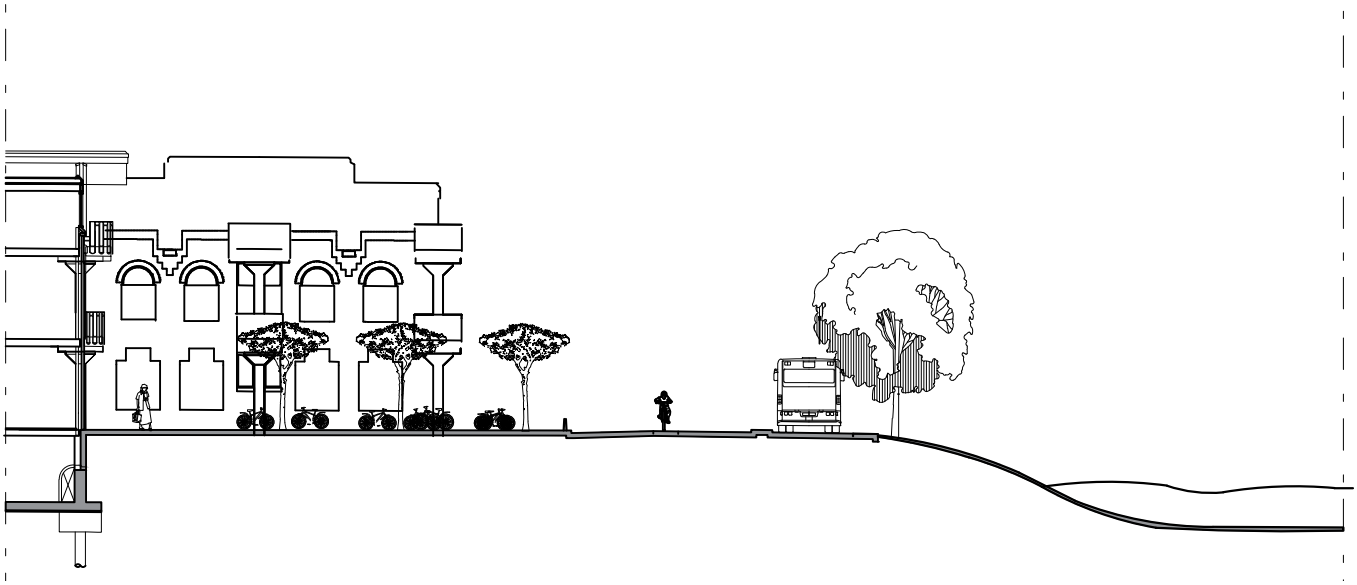


figure 75. Section through the square and surrounding buildings. Scale 1:300

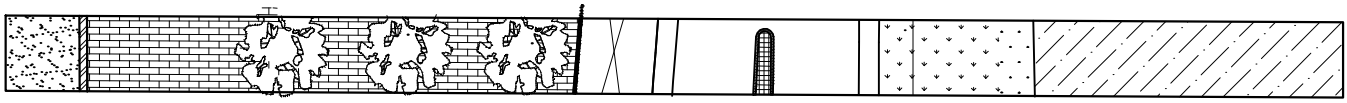
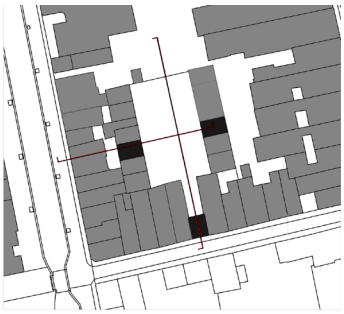


figure 76. Mapping of the materials in plan showing transition from interior to exterior space

figure 77. Elevation of buildings onto the square Scale 1:300

COURTYARD. / Eva van Hoogeveenhof



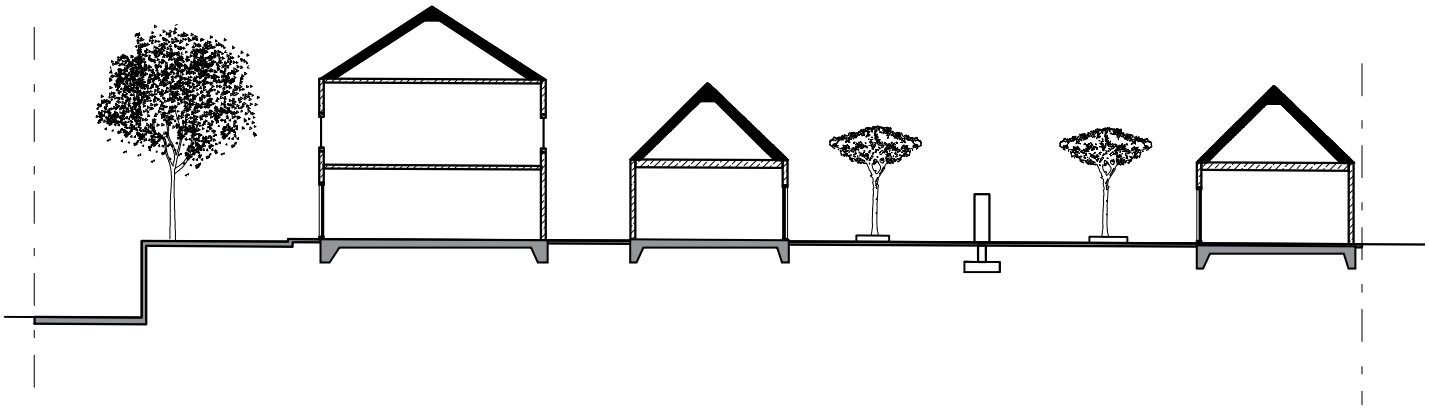


figure 78. Section through courtyard and surrounding buildings.
Scale 1:300

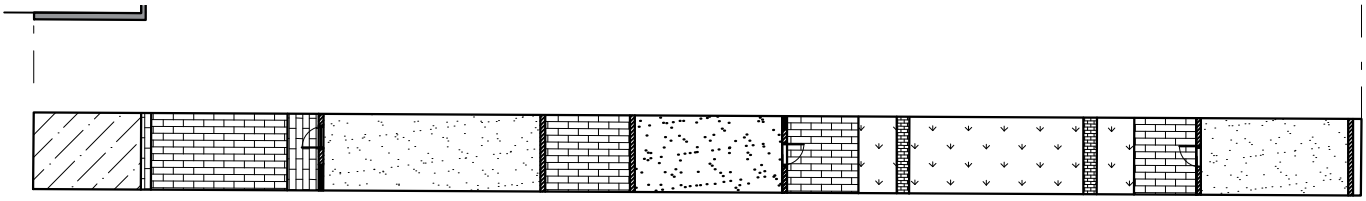
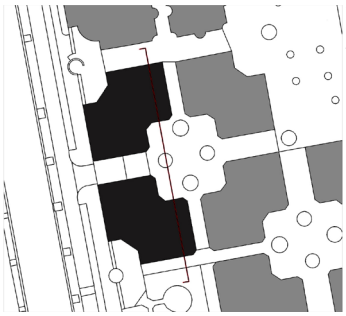


figure 79. Mapping of the materials in plan showing transition
from interior to exterior space

figure 80. Elevation of buildings around courtyard.
Scale 1:300



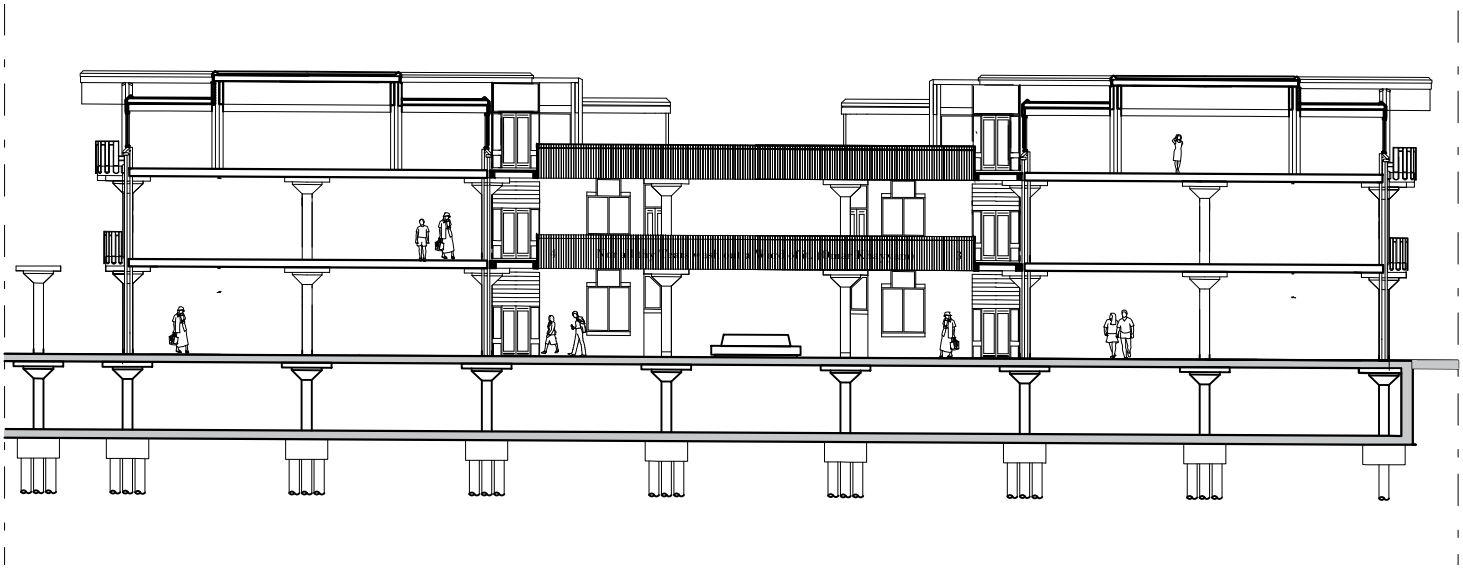


figure 81. Section through courtyard and surrounding buildings.
Scale 1:300

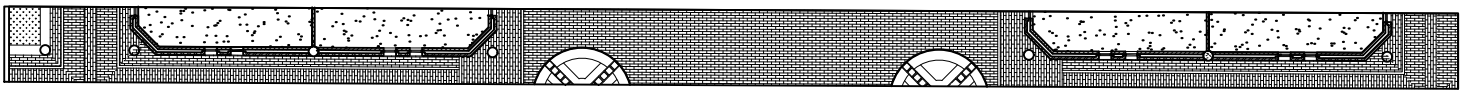


figure 82. Mapping of the materials in plan showing transition
from interior to exterior space

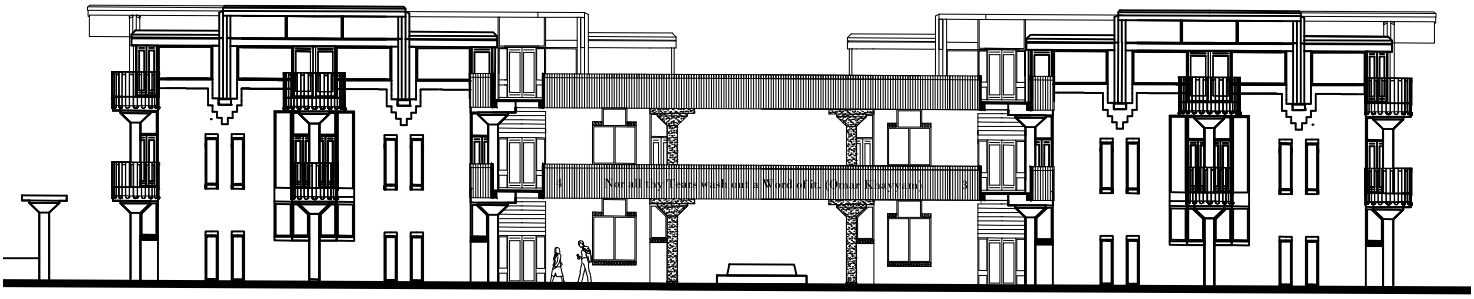


figure 83. Elevation of buildings around courtyard.
Scale 1:300

ALLEYWAY. / Kloksteeg

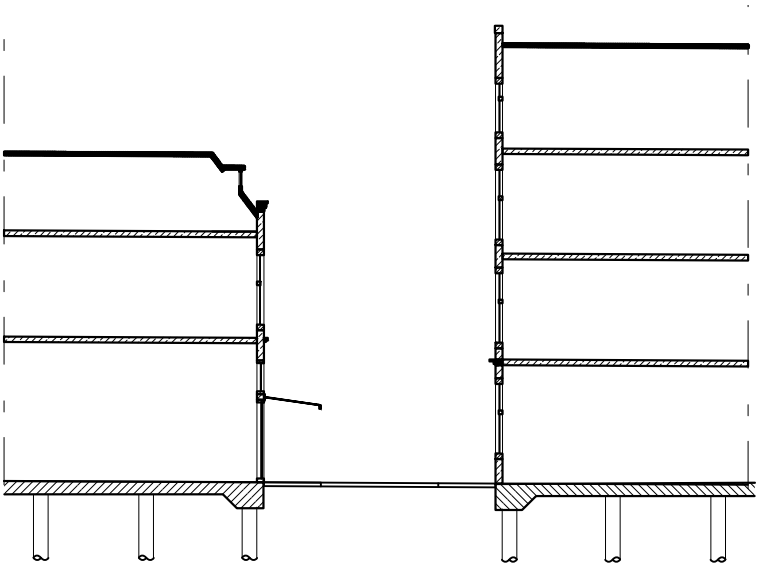


figure 84. Section through street profile. Scale 1:150

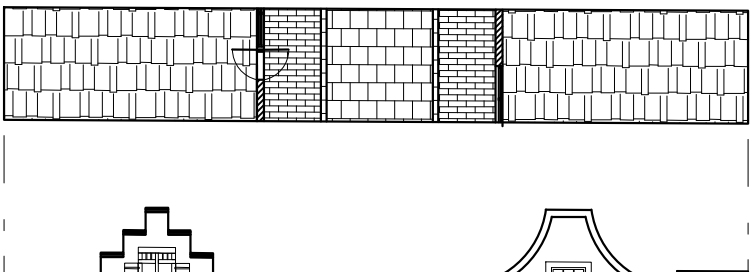


figure 85. Mapping of the materials in plan & showing thresholds from interior to exterior space

figure 86. Elevation of buildings along the alleyway. Scale 1:150

ALLEYWAY. / Faculty of Humanities

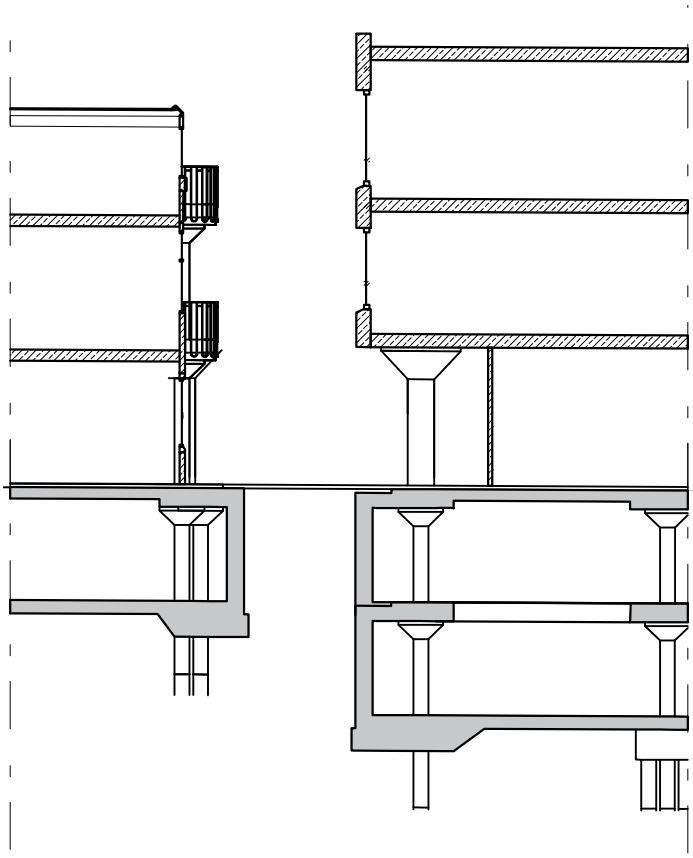


figure 87. Section through street profile. Scale 1:150

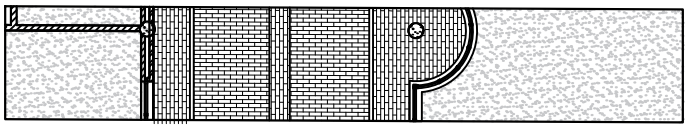
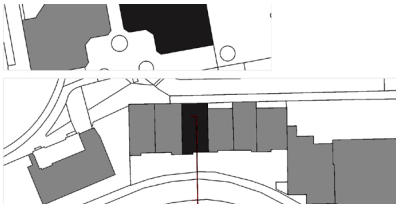


figure 88. Mapping of the materials in plan & showing thresholds from interior to exterior space

figure 89. Elevation of buildings along the alleyway. Scale 1:150



PARK. / Singel plantsoen

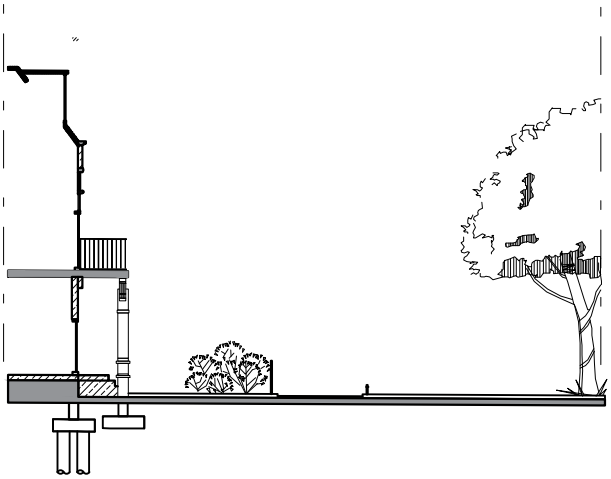


figure 90. Section of urban Street profile and park. Scale 1:300

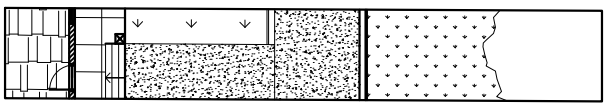
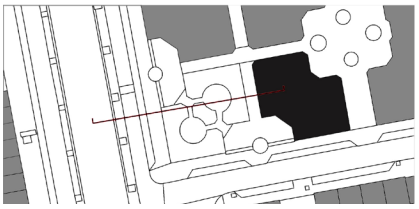


figure 91. Mapping of the materials in plan & showing thresholds from interior to exterior space

figure 92. Elevation showing composition of buildings around the park. Scale 1:300



PARK. / Faculty of Humanities

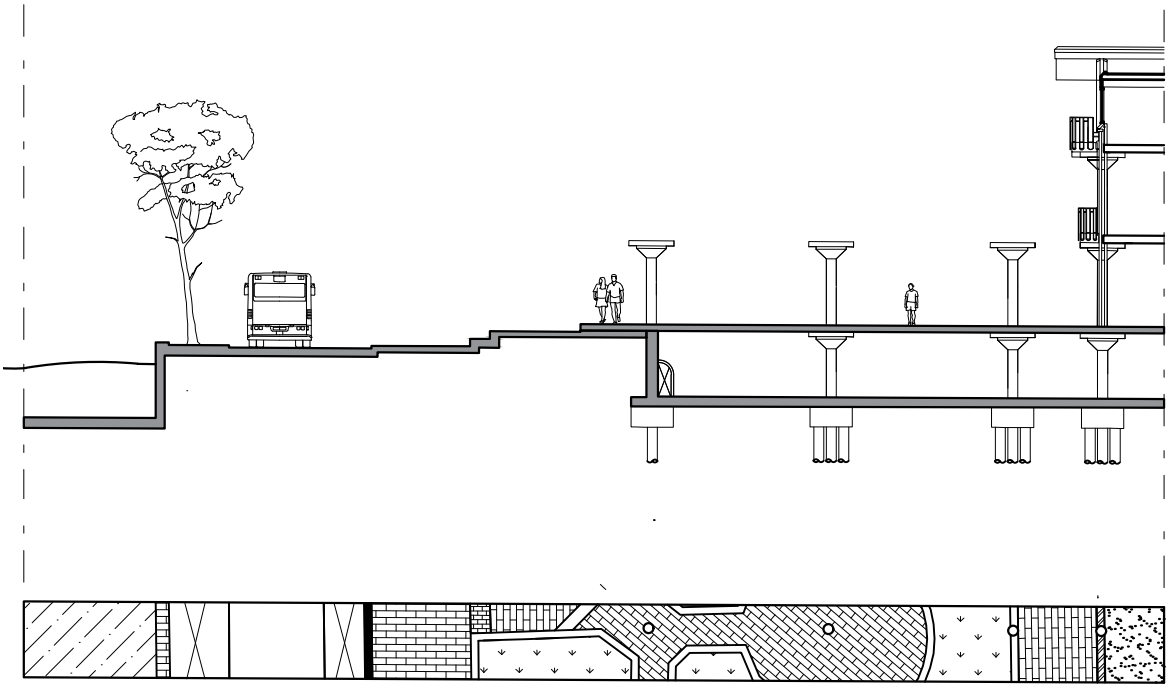


figure 93. Section of urban Street profile and park. Scale 1:300

figure 94. Mapping of the materials in plan & showing thresholds from interior to exterior space

figure 95. Elevation showing composition of buildings around the park. Scale 1:300

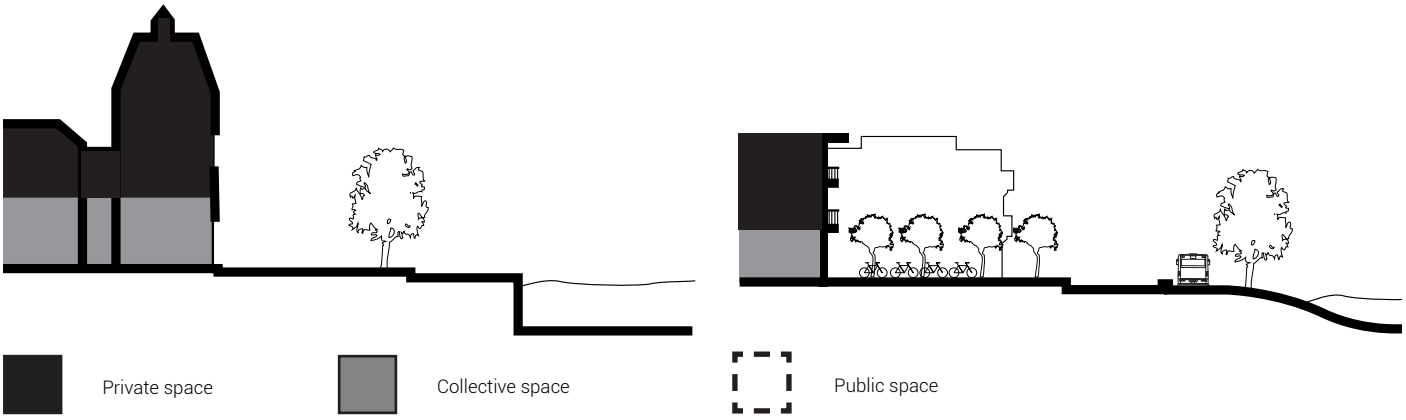
CONTEXT EVALUATION

SQUARE. / Aalmarkt & Faculty of Humanities

From the section, the sequence of space on the Wittesingel north square (from left to right) is the square, pedestrian path, cycle path, street, street island, street, cycle path, grass slope and then water.
Here each zone is separated into individual strips and the space available for each zone is larger. In the example of the Aalmarkt, the different zones are blurred, the interior collective restaurant space spills out on the street, pedestrians, cyclists and cars all use the same path. The seating is close to the water bringing people to the water edge and there is no threshold as the seating is on the same level and same floor finish.

The hard separation between public space of the Wittesingel square and the private space in the building is only directly related to the square through the visual connection through a window. In the Aalmarkt the transition from inside to outside is soft by the use of floor material and the space moves very smoothly from public to an interior collective space through the big double door entrance.
The elevation show how the clear entrance doors and unique facade contrasts strongly with the Wittesingel square where the facade is uniform and no direct entrance is possible from the main square.

The uniform and repetitive facade with small ornamentation makes it difficult for people to know where they should focus their attention in the Wittesingle square. This square is also cluttered with bicycles and there is no program to facilitate the activities for people to stay longer periods of time on the square as seen in the scenario of the Aalmarkt.



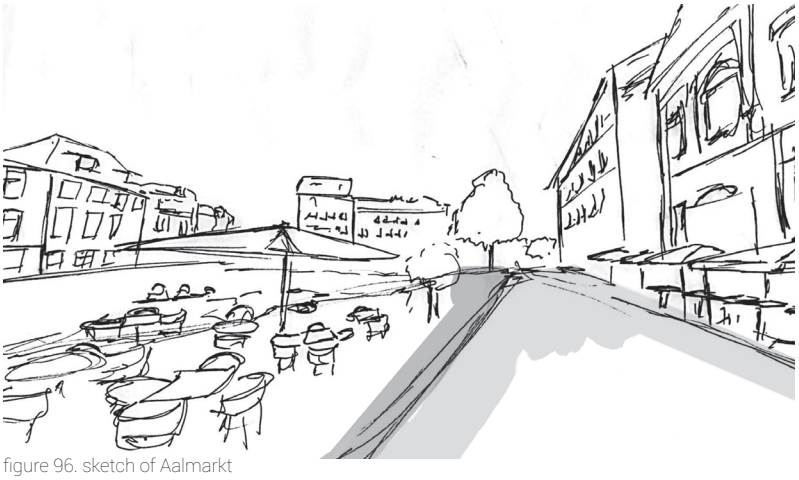


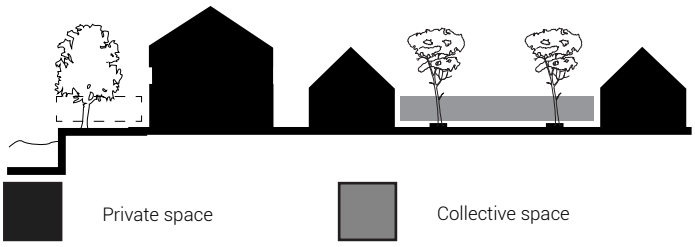
figure 96. sketch of Aalmarkt

COURTYARD. / Eva van Hoogeveenhof & Faculty of Humanities

From the section analysis, the sequence of space from left to right is alleyway, lecture room, courtyard, lecture room, alleyway.
The multiple entrances are marked by the timber circulation bridge above. Otherwise there is no threshold between the very public courtyard whereas the doors from the single entrance to the Eva van Hoogeveen courtyard make the area more secluded. Eva van Hoogeveenhof can be closed off at night which then turns the courtyard from public to collective space.
In both courtyards there is a repetitive pattern of the building elevations however the van Eyckhof courtyard has the same facade on the front, back, left and and right. The Eva van Hoogeveen courtyard only has the left and right sides which have repetitive facades.

The van Wijkplaats courtyard lacks greenery in the center in comparison to the greenery and trees in the Eva van Hoogeveen courtyard. The social interactions between neighbours in the Eva van Hoogeveen courtyard consist of activities like greeting eachpther as one passes another who may be sitting on their personal bench outside the front door or watering their own plants.

The personal interactions on the humanities faculty campus are less unique to the users are the ownership is of the overriding organisations and not by the employees or students so we see less personal infill in the courtyard and the interactions consist of greetings amoungst students on the ground floor before or after class. The social interactions do not occur on the first floor gallery streets as the circulation mainly occurs on the ground floor and the program of the rooms on the higher levels are not suited for making students walk between buildings as Joop van Stigt originally envisioned.



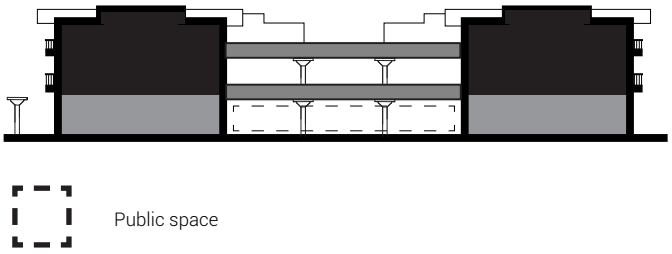
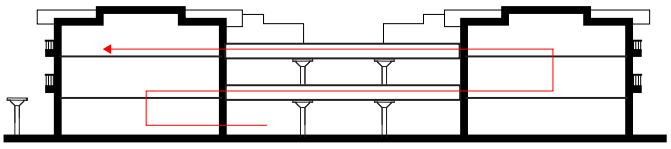


figure 97. sketch of entrance to courtyard



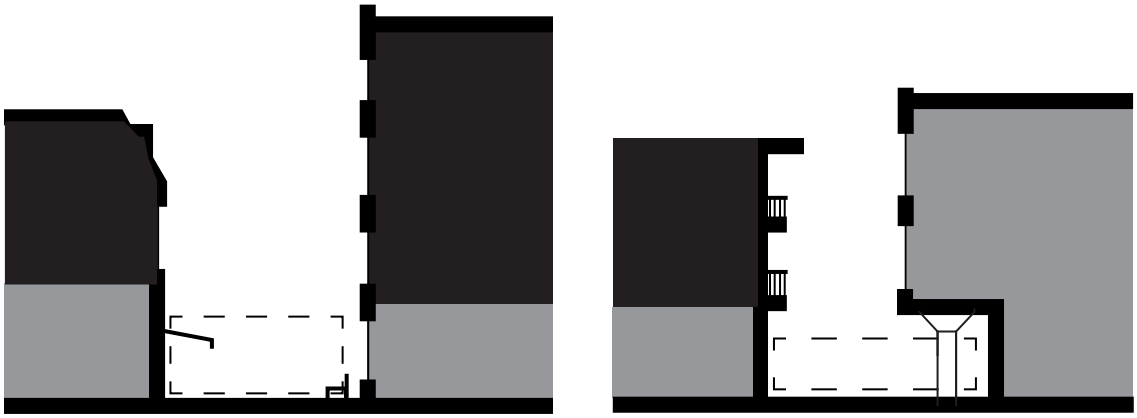
CONTEXT CONCLUSIONS

ALLEYWAY. / Kloksteeg & Faculty of Humanities

From the Kloksteeg section, the sequence of spaces from right to left: interior shop, alleyway with pedestrians and cyclists, interior shop.
The element marking the threshold of the park is a small metal fence.
The Jacob Geelstraatje on Wittesingel campus has the following sequence of space in section: lecture room, alleyway, library work spaces.

In the Kloksteeg, the elevation so the row of buildings on either side vary is size, form, material details where as the elevations on the campus are uniform and repeated.

The biggest difference between the two scenarios is that in the Kloksteeg there is a collective space on both sides with the public space and there is a direct entrance to the alleyway from the shops. On the university campus it is not possible to go from the public alleyway into the adjacent study rooms which means that the activity is experienced as monotonous.



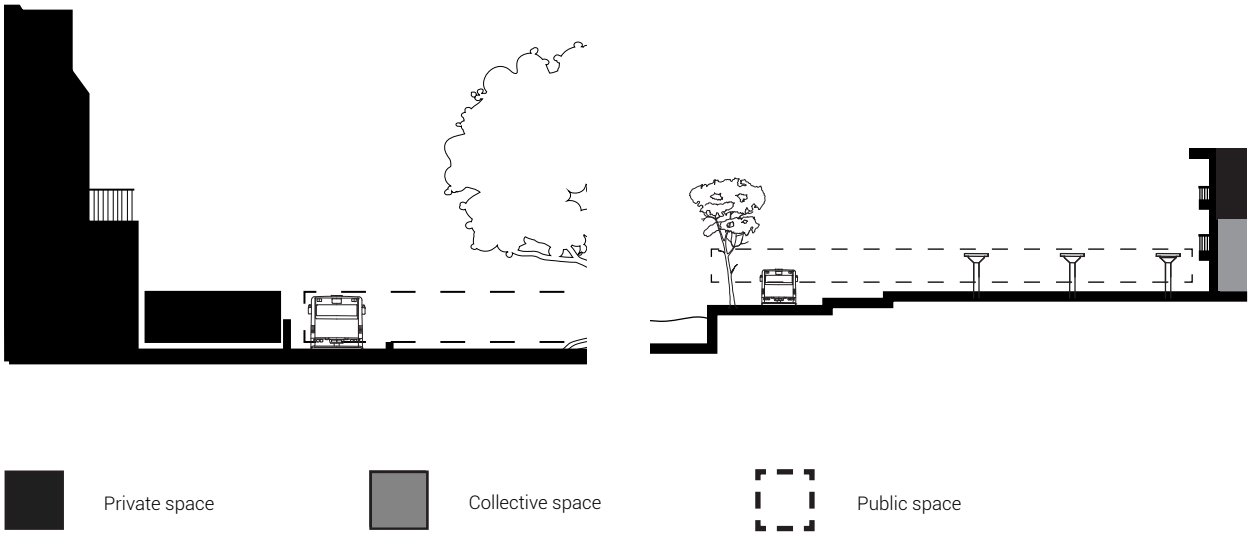
Private space Collective space Public space

figure 98. sketch of Kloksteeg

PARK. / Plantsoen & Faculty of Humanities

From the section analysis, the sequence of spaces from right to left: park, pedestrian walkway, front garden, patio, and then interior space of the house.
The element marking the threshold of the park is a small metal fence.
The nature in the park has no continued buildings elements and feels more organic.
The function of this park is different to Wittesingel complex as it is much larger in size and is used for walks and more recreational activities by nearby inhabitants.

From the section analysis, the sequence of spaces from left to right are water, street, pedestrian walkway, park, alleyway and then interior classroom.
There is a rise in ground level between the park and the surroundings to distinguish where the park starts and ends.
The building elements (columns) continue into the park therefore the nature feels more ordered.
The function of this park is different to Plantsoen park as it is used for lunch time breaks for lecturers and students. Each park is successful in its own function. Green space is always appericated in any form by people for relaxation or for merely a short pauze.



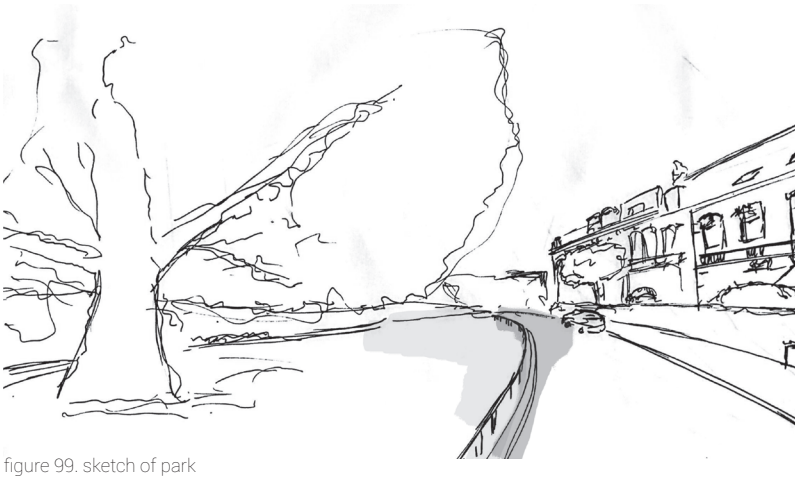


figure 99. sketch of park

CONTEMPORARY EXAMPLES

CONTEMPORARY EXAMPLES. / Introduction

The work of Joop van Stigt and other structuralist architects is mostly restricted to the 1960s' till 1980's. However, does this mean that their ideas were not used after these decades? Are these ideas now considered outdated? Were they maybe further developed? And if so, how are they articulated? All relevant questions when considering the legacy of structuralism in architecture. Therefore, these questions are combined into one sub question:

What aspects of Dutch structuralism are still practiced in contemporary architecture?

The aspects of Dutch structuralism, as referred to in the sub question, are based on the aforementioned analysis and the theoretical framework as given in this report. In summary four aspects of structuralism are given:

- Unit/component
- Open ended
- Building as a city
- Social interaction

These aspects form the basis for our choices for the following four contemporary cases. The choice for each case specifically is more arbitrary, because there are more contemporary examples than these four exclusively. However, these cases do show an array of structuralist ideas, because of which they are considered in this analysis. Therefore the four cases this analysis will contemplate are: the Silodam by MVRDV, Vila Verda by Alejandro Aravena, the Timmerhuis by OMA and finally the Mountain by BIG

CONTEMPORARY EXAMPLES. / Case study

MVRDV / Silodam

The Silodam in Amsterdam designed by MVRDV is designed as if a ship arriving ashore with various containers on top. Therefore the facade is composed of multiple 'containers', these could be considered as the pixels of the facade. This also expresses the heterogene character of the building, containing an entire 'neighbourhood' with senior dwellings, social housing, luxury apartments and maisonette houses. Each of these apartments is constructed of a unit, measuring 5,5 by 10 metres. Furthermore, the building is socially orientated with diverse functions meant to increase social interaction.

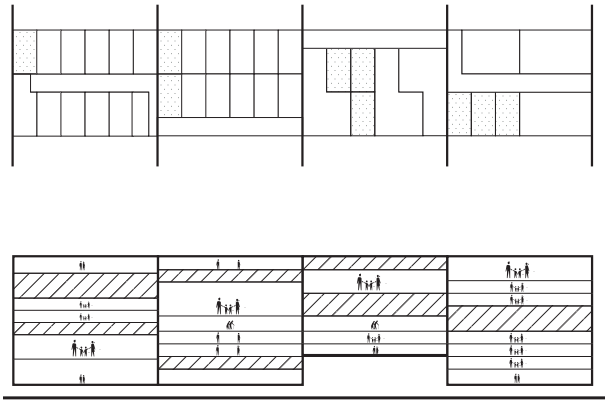


figure 100. Section and plan Silodam

While the building is conceived from different units, the dwellings do not correspond with the visible expression of the facades. One pixel in the facade corresponds with several units inside. The social interaction is also to be questioned, no visible connection between the floors is attempted, resulting in houses composed of units that do not interact with each other.

figure 103. Units and Social interaction

Alejandro Aravena / Vila Verde 2013

Aravena's designs are characterised by the way they are conceived as a collaboration between architect, municipality and -most importantly- the users. This is best seen in his social housing projects like the Vila Verde project. Aravena states that it is better to create 'half a good house' rather than 'one whole' bad house for the available budget. These housing projects therefore consist of units containing half houses. The other half is to be filled in by the users. One could say that Aravena provides the framework or structure, in which the users can appropriate the space. Therefore the structure is open ended.

Vila Verde consist of a line of units, together constructing the frameworkl The pronounced individuality of each unit contributes to the perceived ownership of the dwelling, and therefore the authority for the dwellers for adaptability in the building. The entity constructed of elements is thereby benifitial for the initial concept. Some units are expanded with extra rooms, while others are extended using balconies and outdoor space.

figure 101. Concept Vila Verde

figure 102. Units and Open ended

CONTEMPORARY EXAMPLES. / Case study

OMA / Timmerhuis

The Timmerhuis project is surrounded on two sides by the old Stadstimmerhuis from 1953. The new building fills the plot with several functions including a city museum, offices and dwelling. An inner street connects the two sides of the building, even including a cafe and terrace. There are two large atriums providing natural light on the inner street and accordingly in the offices surrouding the atriums. The inner street, together with the presence of multiple functions makes the project comparable with the concept 'building as a city'. Also the structuralist aspect of units can be seen in this building, because the new complex is composed of a multiplicity of smaller cells.

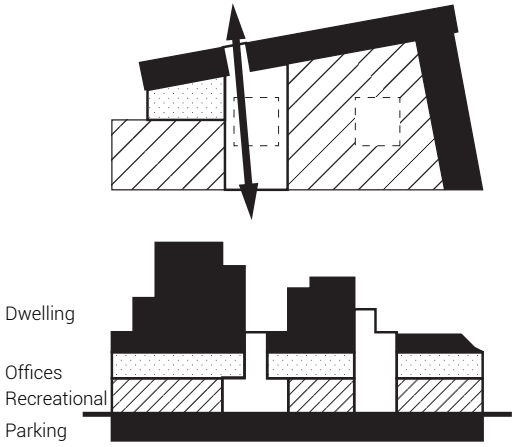


figure 104. Section diagram

figure 106. Units and Building as a city

Bjarke Ingels Group / The Mountain

BIG's architecture emerges from analysis of how contemporary life constantly evolves and changes. The internationally practicing office is consistently looking for new ways of architectural and urban organization.

The Mountain is just one of these projects where the concrete hillside like parking is covered by a thin layer of housing which cascades from the first to the eleventh floor. The project has a similar form to the Kasbah shaped buildings of the Structuralism era. The project was built in Copenhagen, Denmark and the goal was to merge the benefits of suburban living with urban density. All apartments have roof gardens facing the sun, amazing views and a connection to the street by having parking on the same level.

The collective parking area leads to a communal gallery walkway with each private apartment having a front door onto the walkway. The critique of the project in the book, Structuralism Reloaded, is that the engagement with the public realm is lacking, the social interaction was a key factor in design of structuralist buildings whereas here each dwelling cube is isolated from the neighbour.

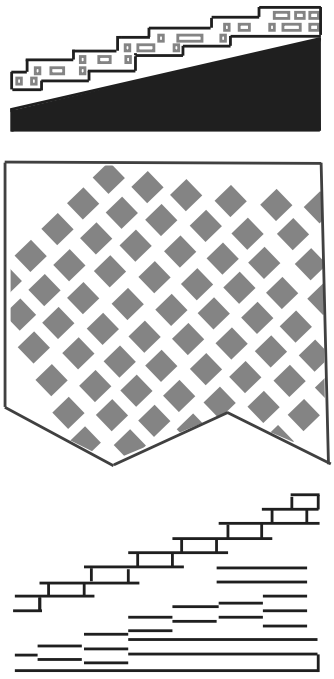


figure 105. Section and plan The Mountain

figure 107. Units

CONTEMPORARY EXAMPLES. / Evaluation

While in general structuralism is not regarded as a building style that is still practiced, we notice that many of the structuralist aspects are still being used. Most notably, due to the invention of computers and their respective screens, unit architecture is today often referred to as pixel architecture. This is for instance the case with The Mountain and the Timmerhouse projects. In essence unit and pixel are not far apart. However, sometimes this pixel architecture can only be an expression, while the building itself is constructed rather generic, as is the case in the Silodam.

The four contemporary cases we researched in this analysis all display one or sometimes two of the aspects of structuralism. Therefore it can be seen that the principles of structuralist are not considered as outdated, but can still be attributed within a contemporary design case.

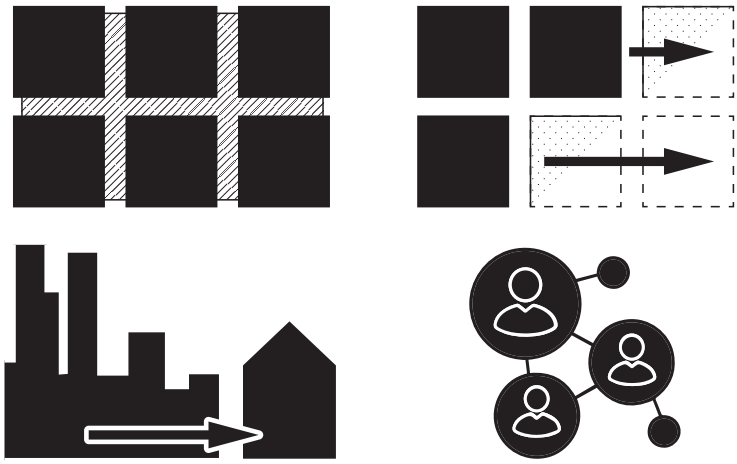


figure 108. Four aspects of structuralism

BUILDING TECHNOLOGY

BUILDING TECHNOLOGY. / Introduction

Next to investigating structuralism and the impact it has had on the formation of this building, it is important to understand the technology used in the building. This will be beneficial in understanding how to approach the transformation. This part of the research therefore focusses on the installations, materialisation and construction of the faculty of Humanities, in which multiple facets of the building technology of the complex are examined. These aspects are respectively, circulation, ventilation, heating, plumbing and water drainage. In addition the detailing of the building is researched. This is done by means of several sub questions.

Does each building unit in the cluster have its own installation systems or are they all linked per cluster? If so how are they linked? Does the cluster function as one whole or as parts in terms of the installations?

What are the different facade and roof conditions? How is the core principal of open ended seen in the sections and elevations?

What opportunities does the existing construction framework give for the transformation?

The method used to answer these questions was to analysis construction drawings from the archive collection of Joop van Stigt at Het Niewe Instituut. A 3d model is used to show the fundamental principals for the circulation, ventilation, central heating, rainwater drainage, and plumbing services. Facade sections 1:100, roof plan and elevations show how the structural has the capacity to be extended vertically and internally the room dividing walls can be adjusted. Finally, at the start of the analysis a group model was made at scale 1:50 of a building unit and its context. The layers to the construction were well analyzed through the making of the model.

BUILDING TECHNOLOGY. / Circulation

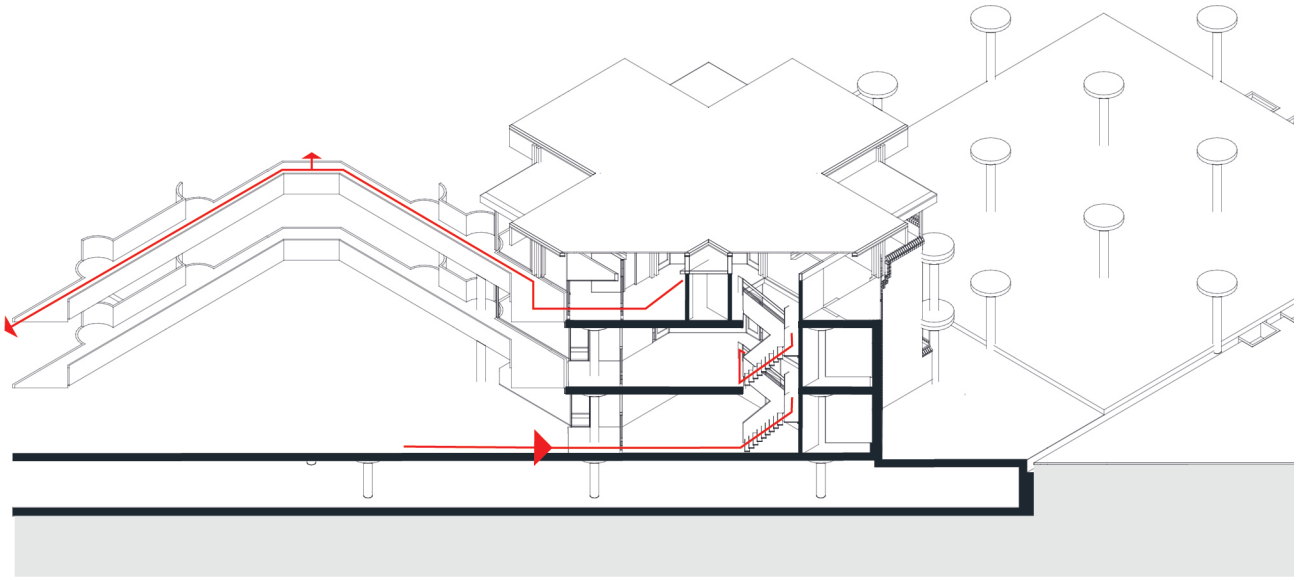


figure 109. Circulation principle

Each building has an individual entrance from the courtyard.
The middle building has the lift in the entrance hall.
All buildings per cluster are linked to the lift building via the exterior timber bridges.

BUILDING TECHNOLOGY. / Ventilation

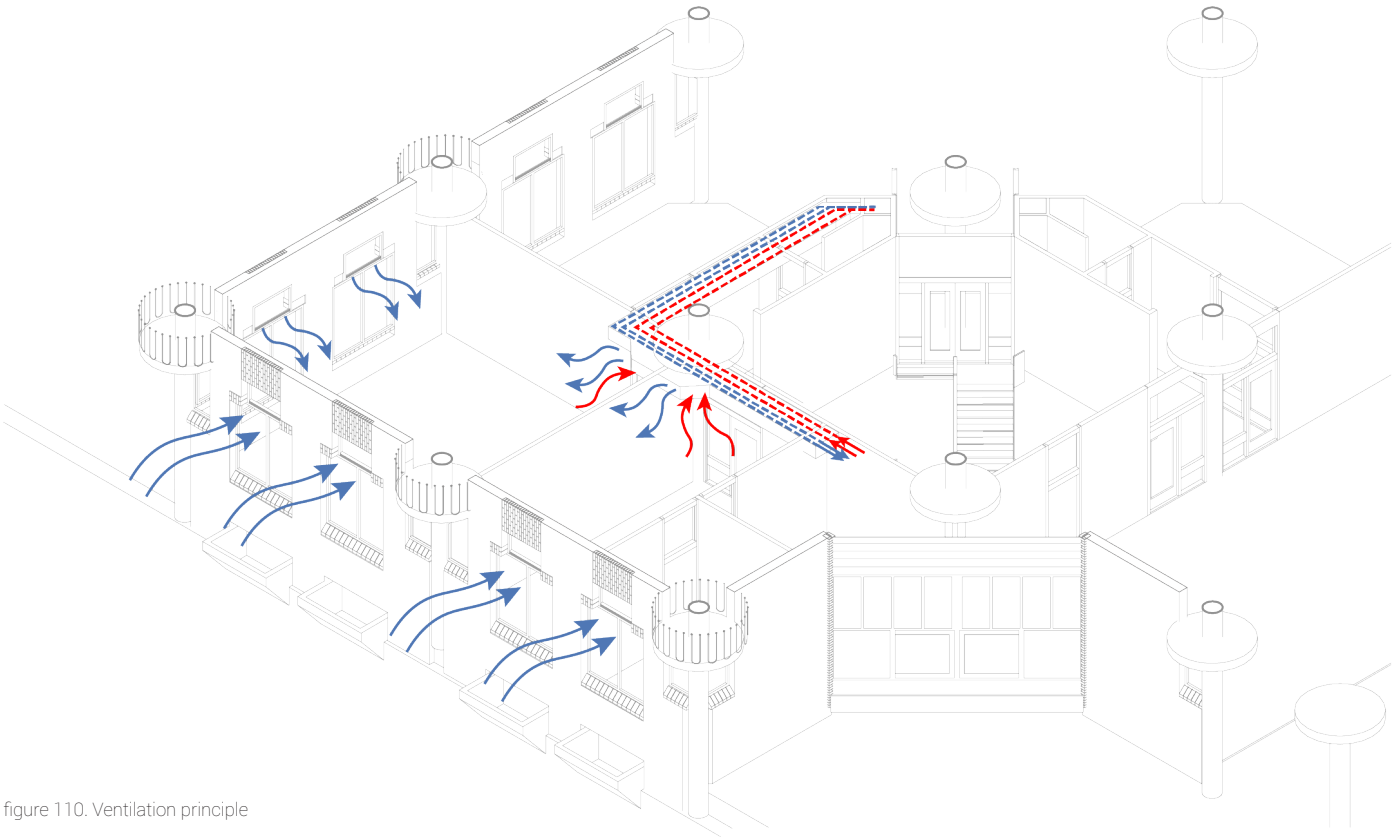


figure 110. Ventilation principle

There is a combination of natural and mechanical ventilation systems used in these buildings.
Per cluster is there a mechanical pump which cools or warms air and then is distributed to each building via the basement and then vertically the air is distributed per floor via the WC shafts.
Air can also be adjusted per floor level.

BUILDING TECHNOLOGY. / Heating

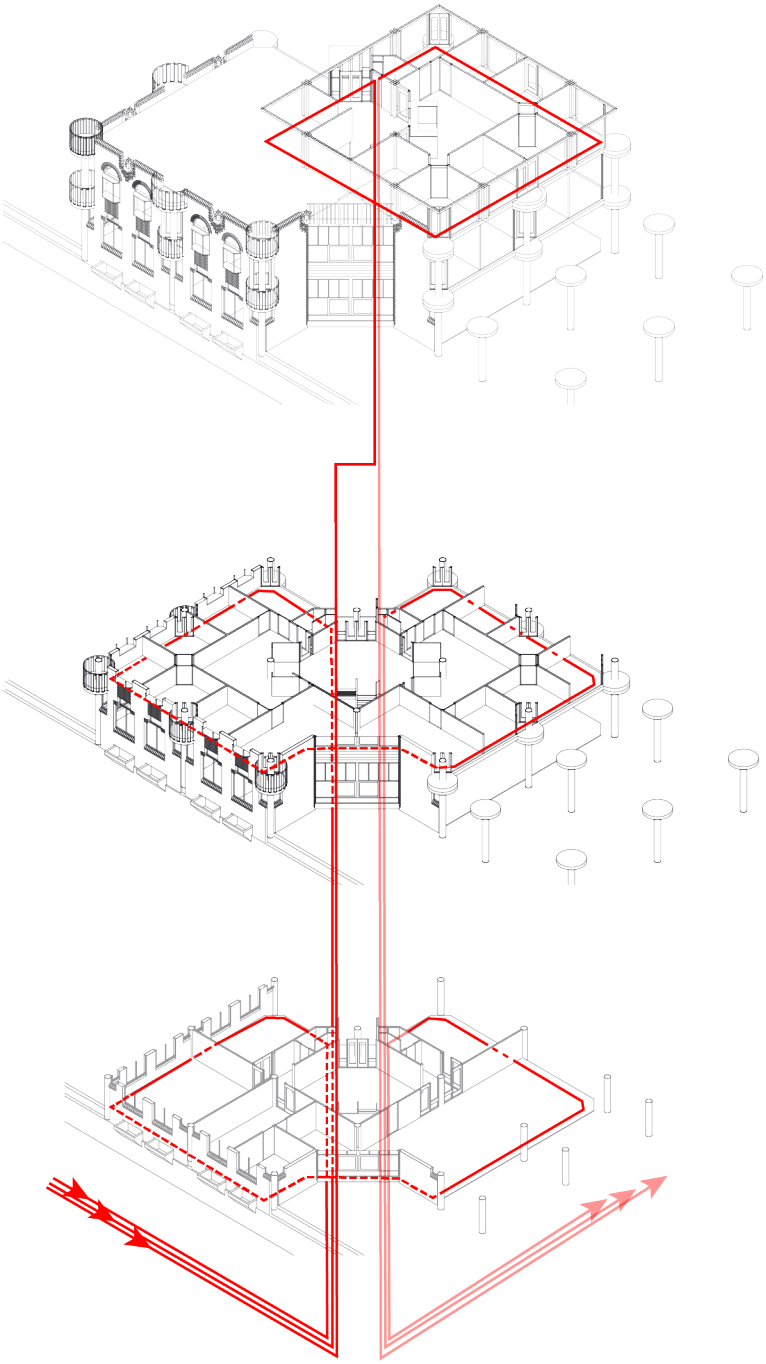


figure 111. Central heating principle

Water is pumped to the installation plant room above the lift shaft. Here the water is heated by gas boilers.
Warm water goes back to the basement and is distributed to all buildings where it then goes up the shaft via three pipes (one pipe per floor level). Three pipes with colder water then go back down to the cold water waste pipe in the basement.

BUILDING TECHNOLOGY. / Water drainage

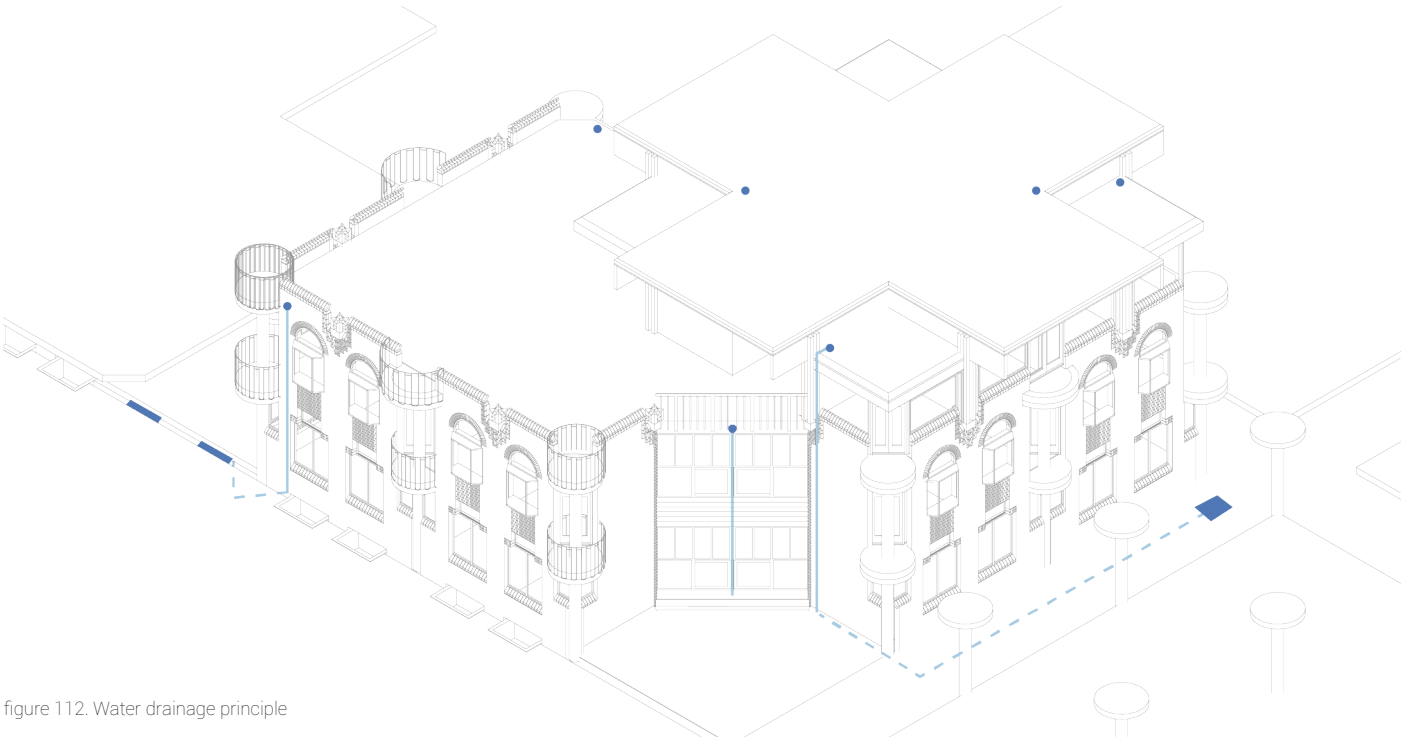


figure 112. Water drainage principle

The flat roofs slope towards the rainwater outlets which then takes the water through the rain water down pipe and release the water on the ground floor pavement. The paving is also sloped toward rainwater grills where water is then collected in a pipe in the basement and removed in the same way that other water water in the building is removed.

BUILDING TECHNOLOGY. / Plumbing

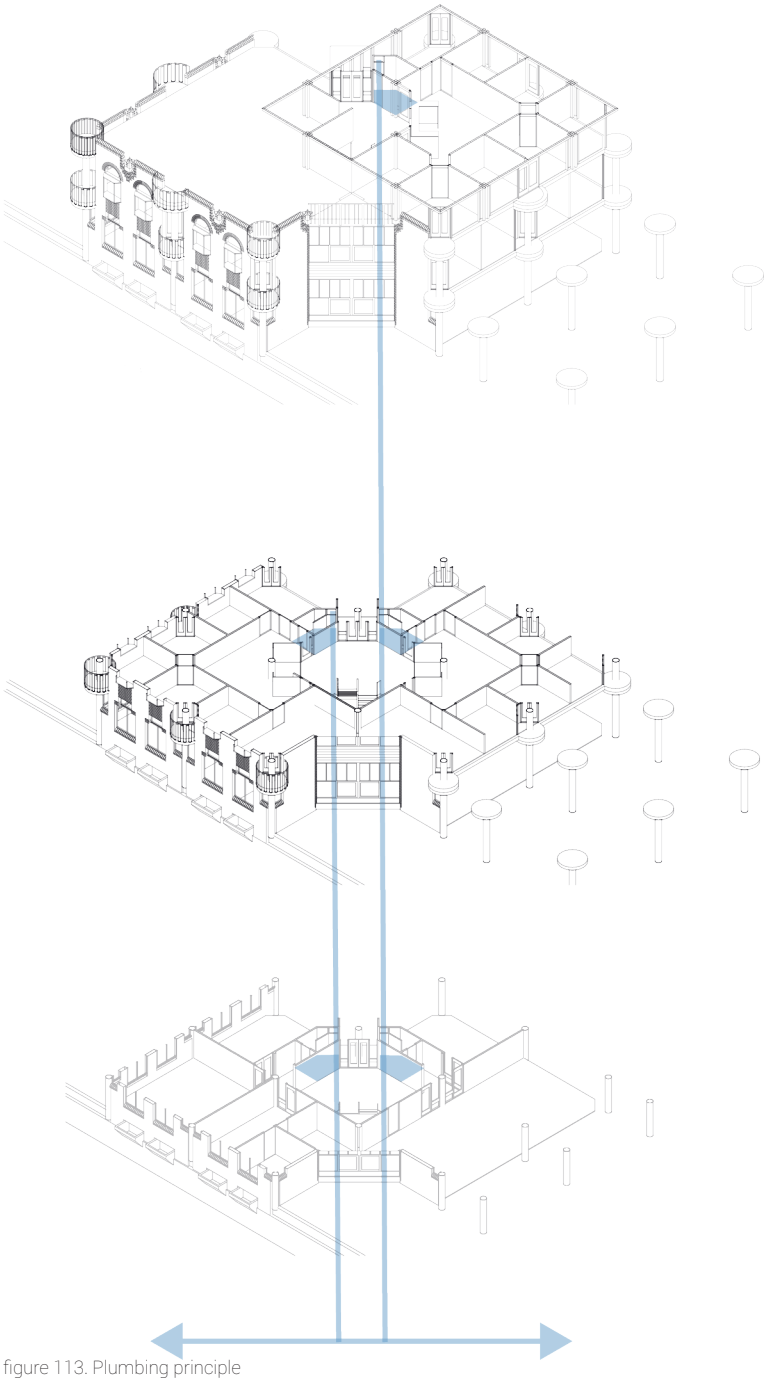


figure 113. Plumbing principle

Each toilet has a vertical waste water plumbing pipe.
which is also in the same duct as the air ventilation, central heating and electical wires. The dilemma is that the duct space is very small.

BUILDING TECHNOLOGY. / Roof type 1

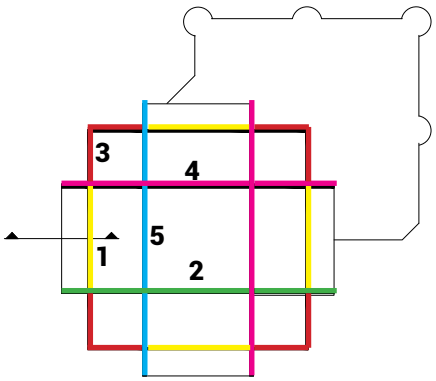


figure 114. Key plan 1:500

The first roof type consist of a wooden construction protruding over the facade.

The roof type one is made of intersecting beams of 900mmx140mm cross sectional dimensions. These beams are beams 2, 5, and 4 in the key plan above.

The light weight timber roof is in good condition.

In this section it is clear to see that the concrete structure is exposed to the exterior. Heat loss through the concrete can be minimised by adding a new skin around the structure (either internally or externally).

The floor to ceiling height is most big under roof type one.
The timber ceilings on lower levels is positioned almost against the underside of the floor slab so all new installations will need to be exposed or the ceiling should be lowered with a stepped ceiling towards the windows.

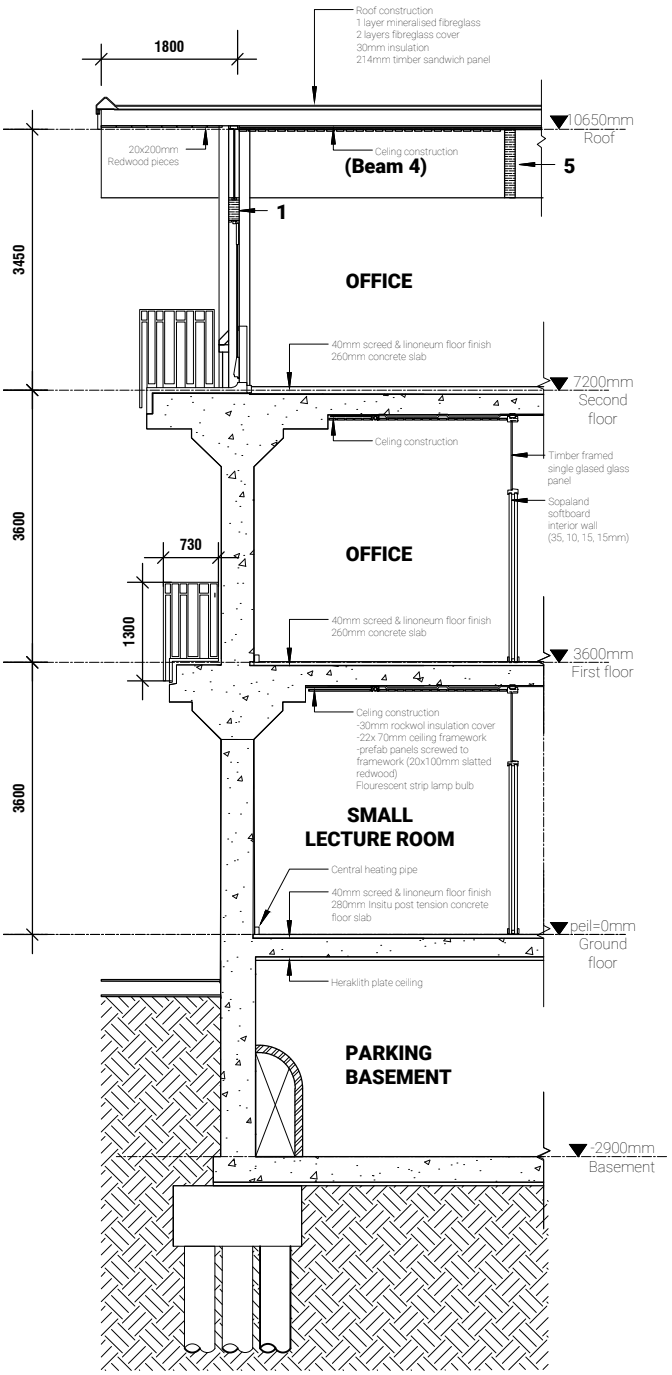


figure 115. Section 1:100

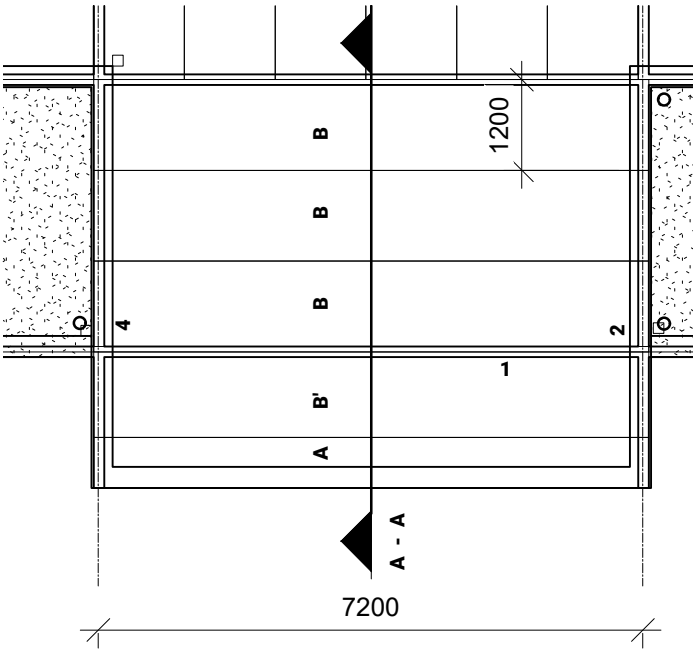


figure 116. Roof Plan 1:100

figure 117. Elevation 1:100

BUILDING TECHNOLOGY. / Roof type 2

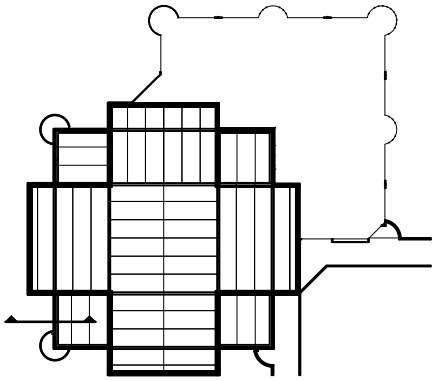


figure 118. Key plan 1:500

The second roof type is connected to the first roof type. It differs because in this case the roof does not protrude and it is lower than roof type one.

The cross sectional dimension of these beams are 350mmx140mm.

The skin of the building between the concrete columns has concrete blocks internally and brickwork externally.

When making the window openings, the brickwork course was kept in close consideration.

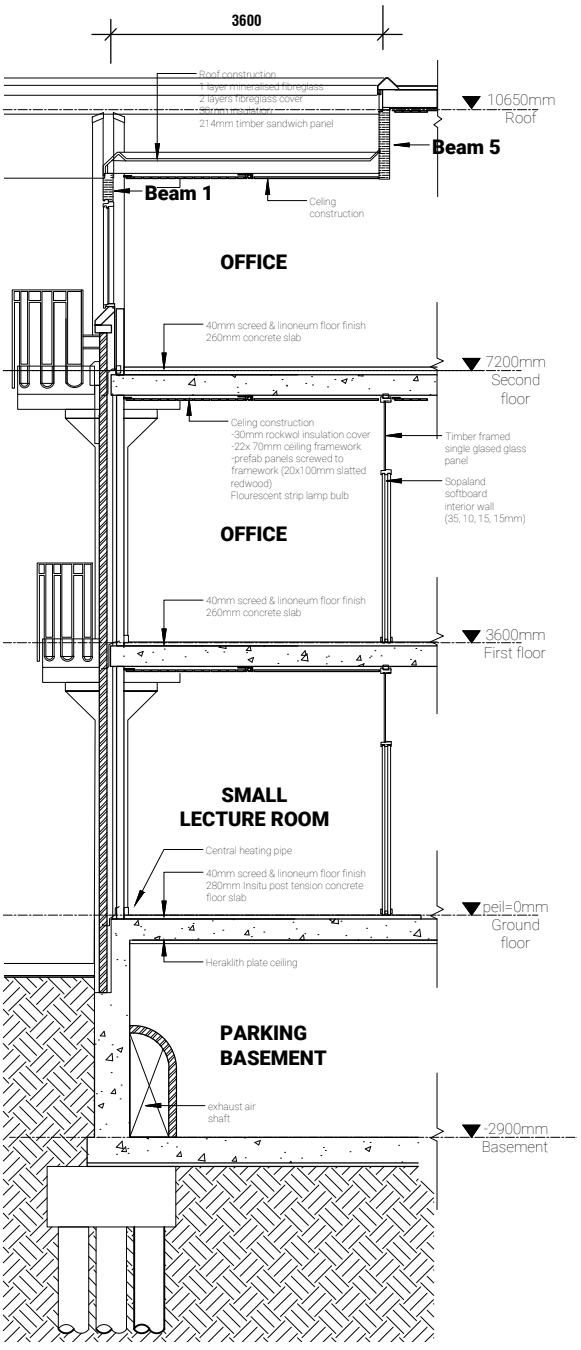


figure 119. Section 1:100

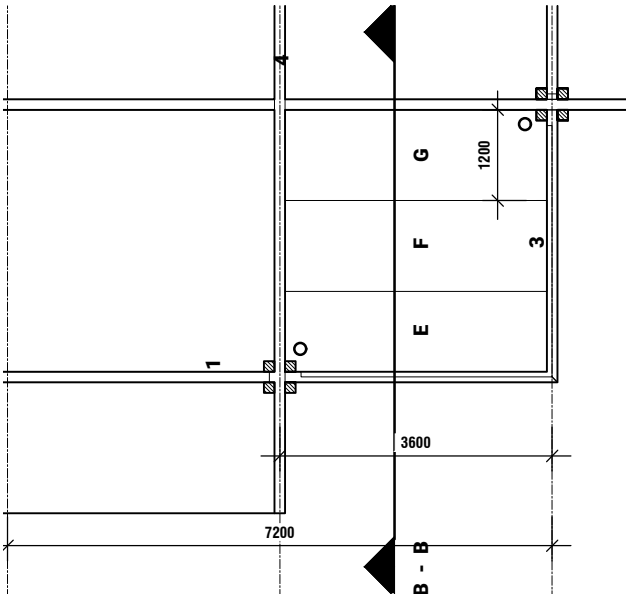


figure 120. Roof Plan 1:100

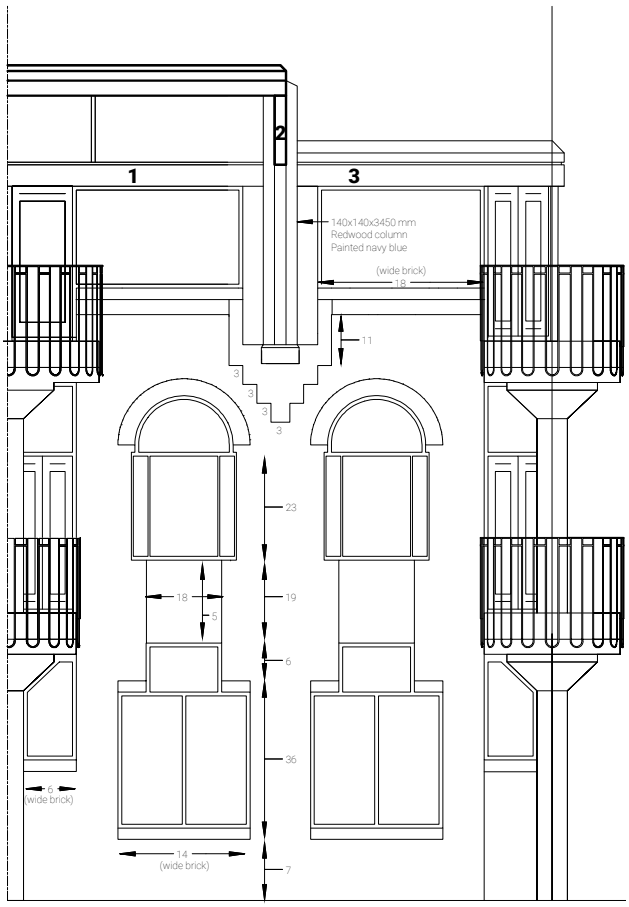


figure 121. Elevation 1:100

BUILDING TECHNOLOGY. / Roof type 3

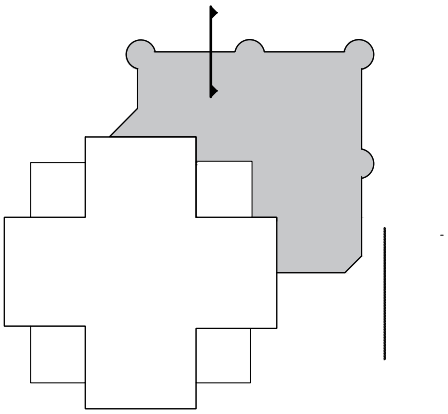


figure 122. Key plan 1:500

The final roof type does not contain the wooden construction.

There is the opportunity to add additional usable floor areas here by adding a similar timber roof on all the roof type three scenarios. This was also the intention of Joop van Stigt and this can be seen in the elevation where a concrete plinth (with a temporary timber ornament) on the brickwork facade is visible. This detail is still waiting to be able to reach its full potential. Here the open ended nature of the architectural design is strongly expressed.

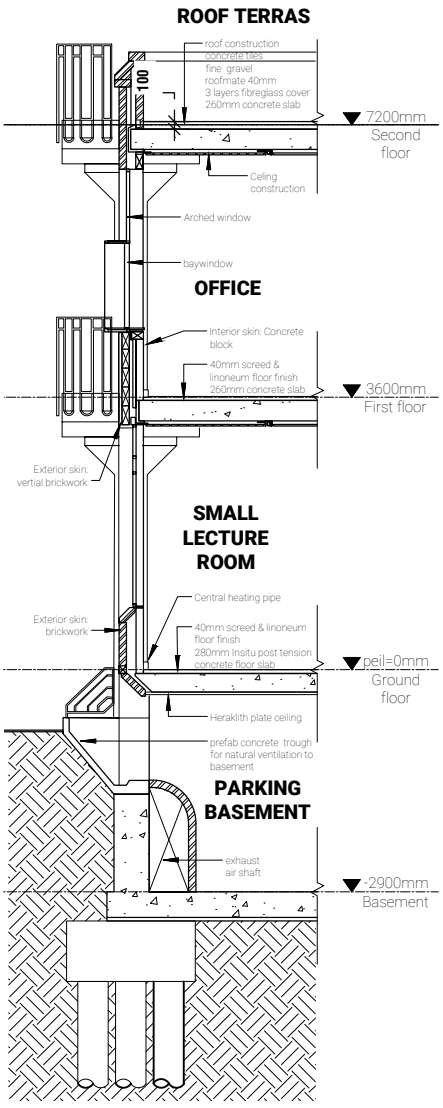


figure 123. Section 1:100

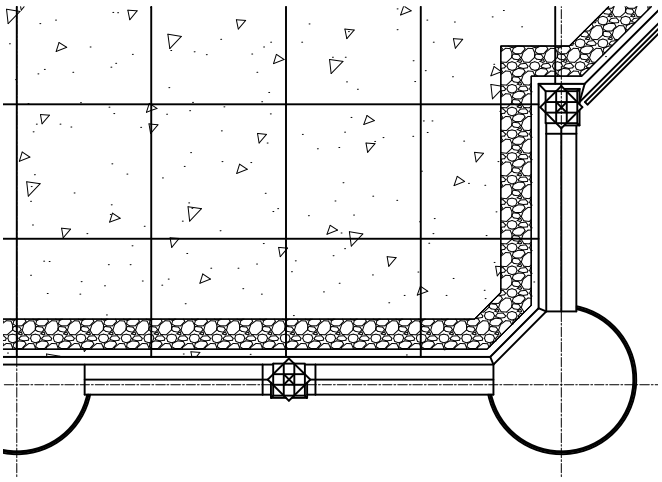


figure 124. Roof Plan 1:100

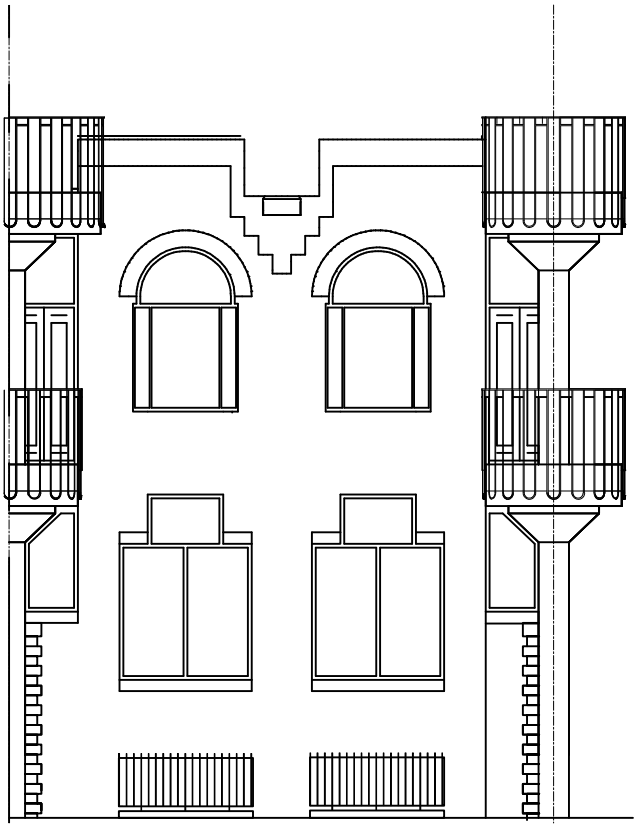


figure 125. Elevation 1:100

BUILDING TECHNOLOGY. / Details 1:20

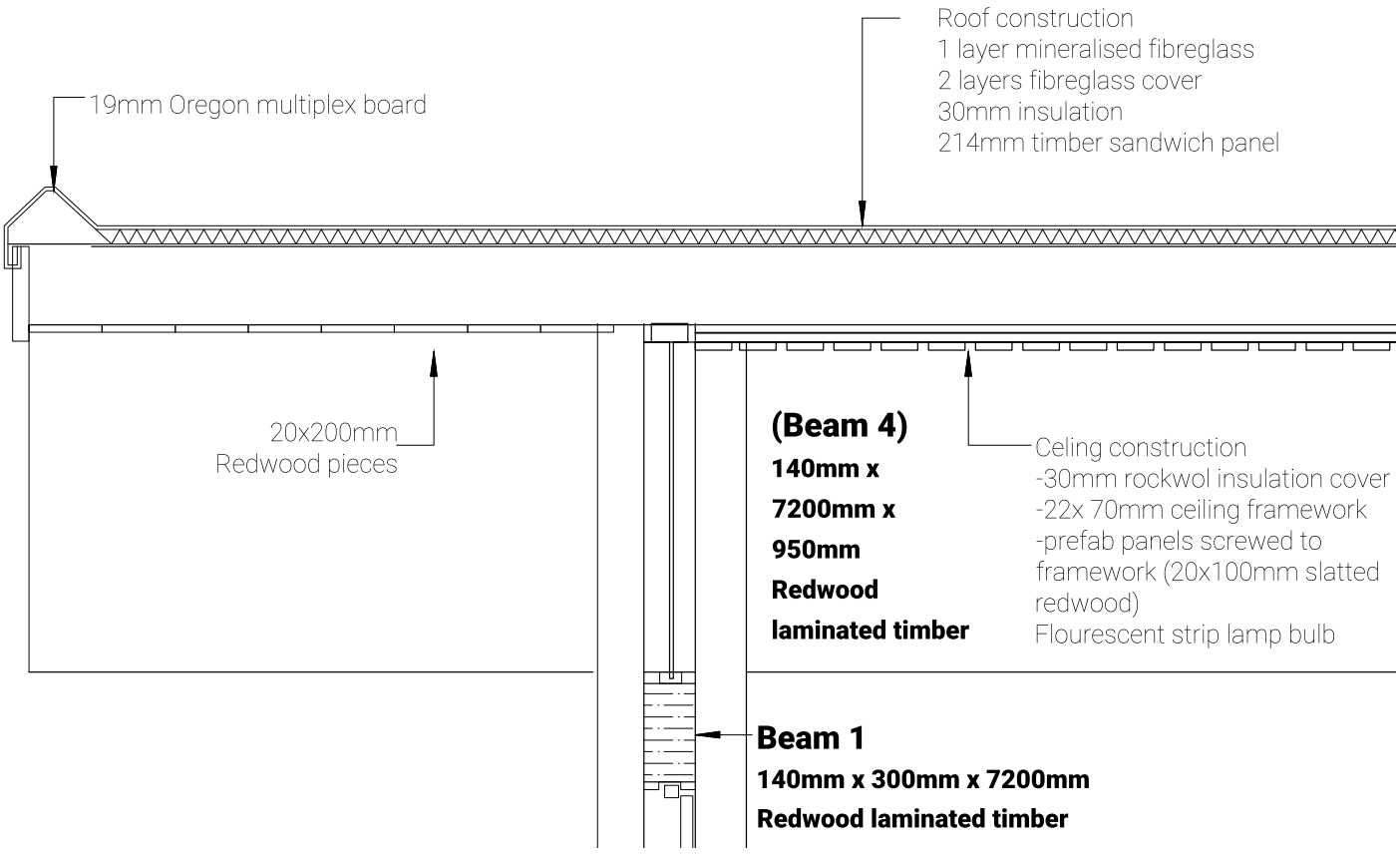


figure 126. Roof type 1

Roof details show that the interior finish of the roofs has minimal space for ducts. Also the amount of insulation present in walls and roofing is rather small. Moreover, the insulation line is interupted on multiple occassions.

BUILDING TECHNOLOGY. / Details 1:20

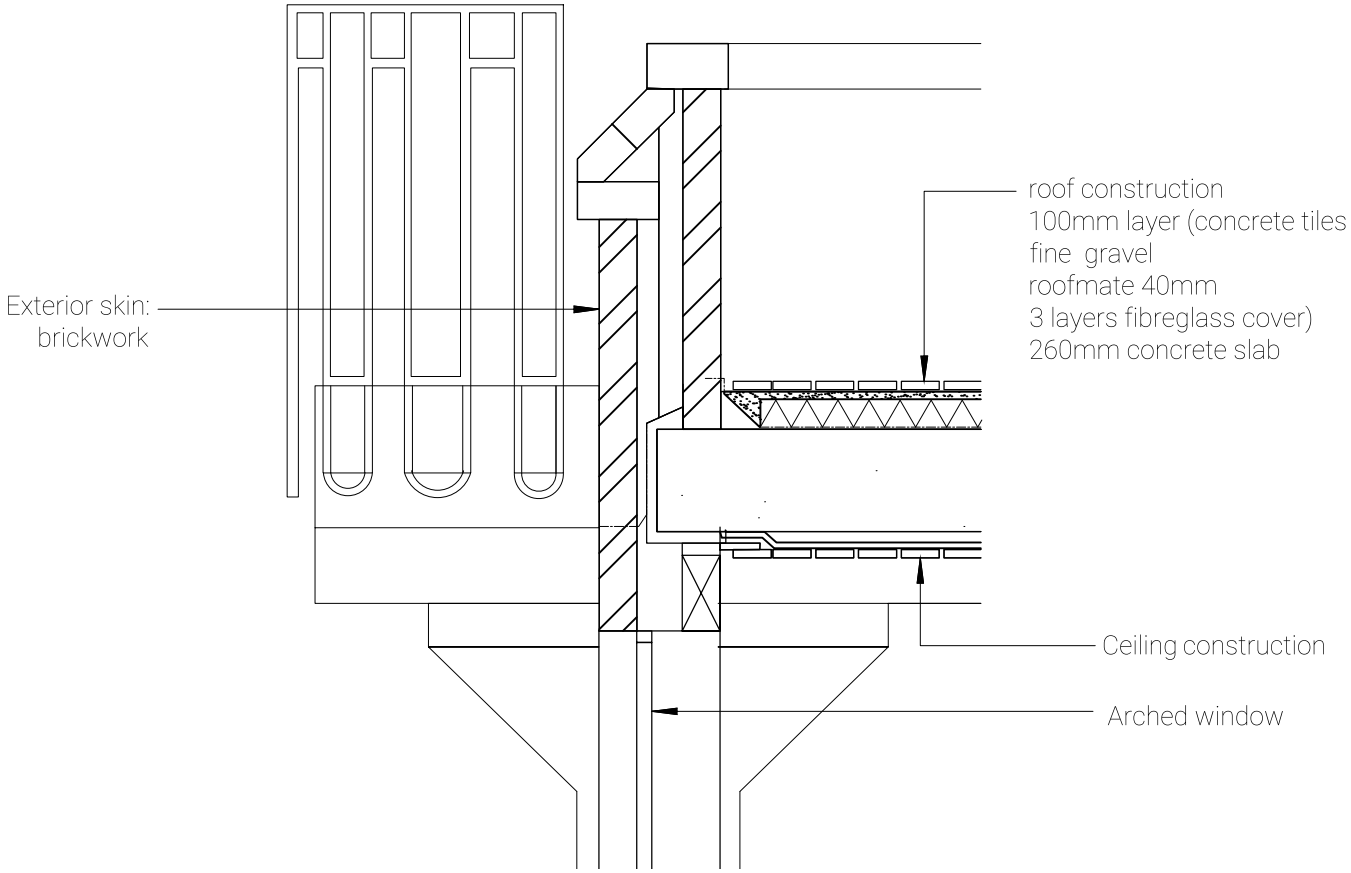


figure 127. Roof type 3

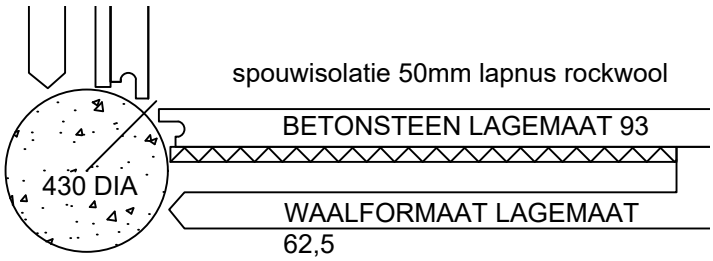


figure 128. Plan detail of wall and column joint 1:20

BUILDING TECHNOLOGY. / Construction built-up

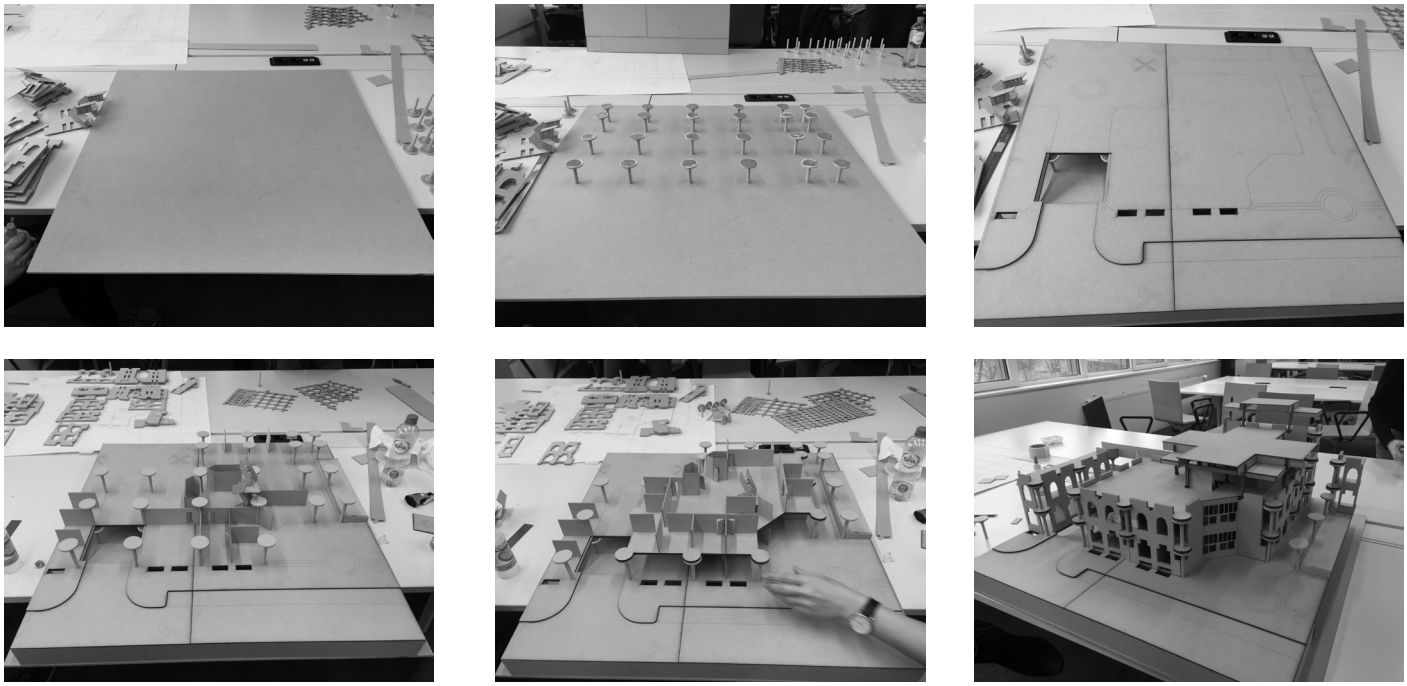


figure 129. Images of maquette construction

Through making the model it became evident that the faculty of Humanities is constructed using fixed columns and floors, leaving an open floor plan in between. The facades are built up against this concrete construction, after which the the wooden top construction can be made on top of these facades to finish the building.
The concrete construction shows resemblance with the Plan Domino, designed by Le Corbusier in 1914. Therefore, the design of the faculty of Humanities is not a definite schism with CIAM ideas. The *plan libre* idea is taken, and developed by adding mushroom colomns, therefore diminishing the needed height of the floors.

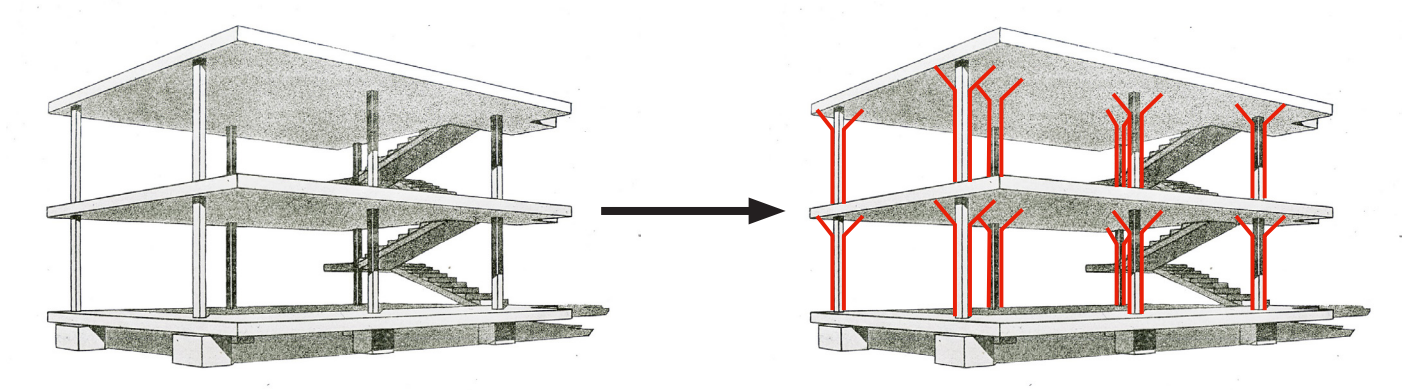


figure 130. Plan Dom-Ino by Le Corbusier, 1914

CONCLUSIONS

CONCLUSIONS. / Structuralism in the faculty of Humanities

Where and how is structuralism visible and experienced in the Faculty of Humanities?

In doing this research we considered the history and development of structuralism, the core principles of structuralism, the work of Joop van Stigt and the experience of the faculty of Humanities itself. Through the research we found four core principles of structuralist architecture. These core principles as well as a clear development in the work of Van Stigt culminate within the faculty of Humanities in several ways and on several scales.

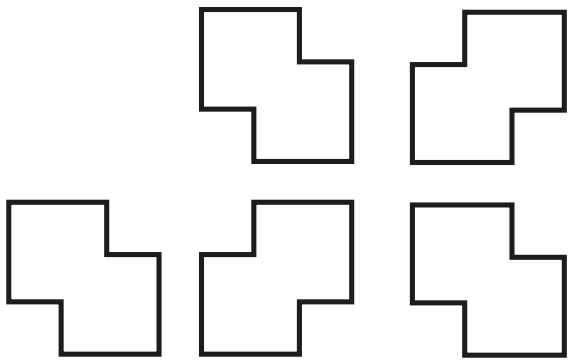
When focussing on the structuralist aspect within the faculty, it is clear that these principles are first and foremost intended by the architect. However we also see that there is a difference between the intentions of Van Stigt and the reality of the users experience.

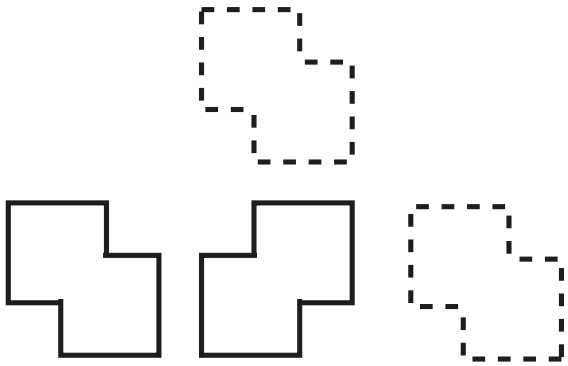
In the following pages, these intentions are listed and considered in an evaluation. These evaluations in their turn could be considered as basis for the value assessment and the possible starting points for the transformation. When approaching the design transformation the principles should be taken note of:

- Consider the relationship of the unit in regard to the whole;
- Consider infill and interpretation for future adaptions;
- Consider the way this building is designed as a city and fits within the city;
- Consider improvements and opportunities for social interaction.

EVALUATION INTENTION

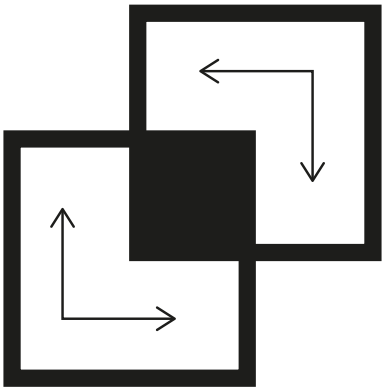
Units

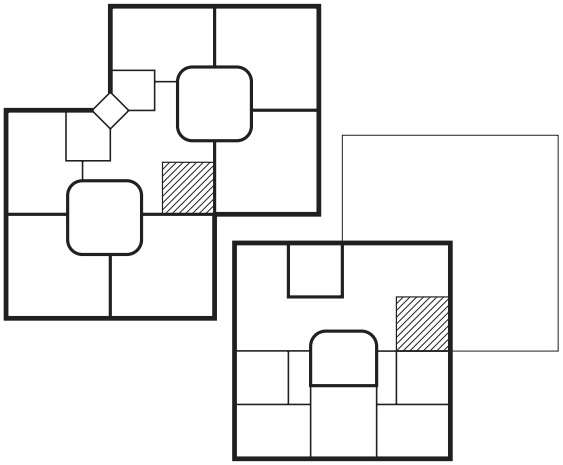




The units Joop van Stigt designed are still dominant and define the building. If one or more of these units are removed or changed, the character of the building is altered.

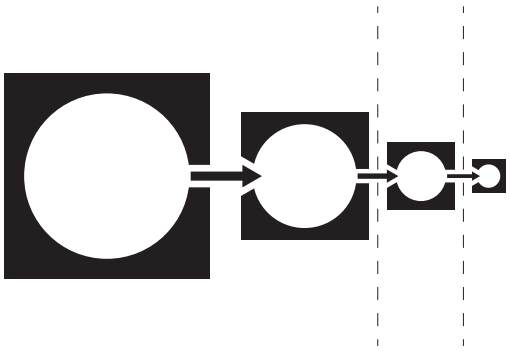
Open ended

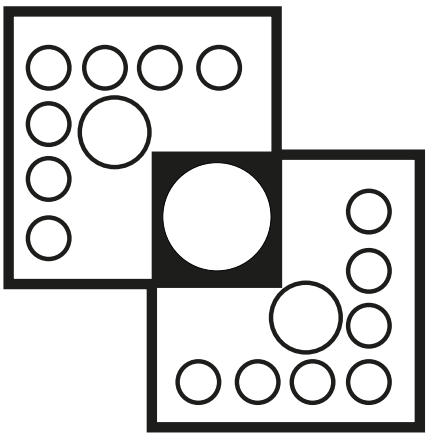




Joop van Stigt created several indications for expanding his plan. For instance, the columns in the park and space for power outlets on the roof. In reality the changes are made not in extending the building in horizontal or vertical direction. Rather the floor plans are changed due to the easy removal of interior walls.

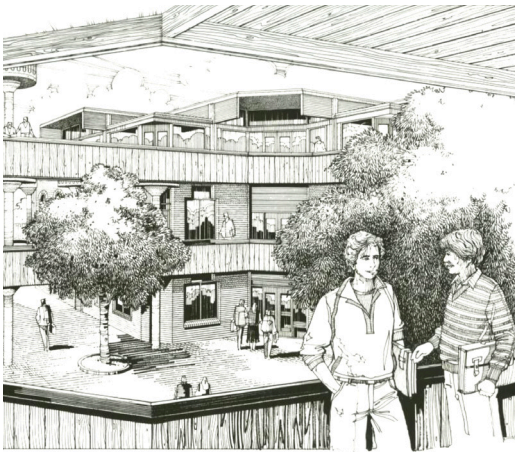
Building as a city

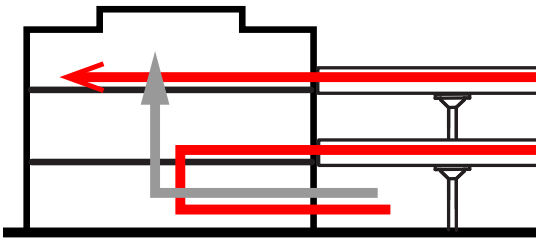




Although in floor plan the city is moving into the building in reality these transitions of spaces are a bit seperated from each other, creating disconnected ‘islands’.

Social interaction





Joop van Stigt had a vibrant environment in mind where people would meet each other outside the builings but the buildings functions on their own and people rarely move out.

VALUE ASSESSMENT

FACADES. / Structuralism in the faculty of Humanities

This is one of the few brick facades by Joop van Stigt. The choice of this typical Dutch building material is not necessarily the reason of high value but certain articulation in the facade refers to the work of van Stigt. Due to the columns you recognise the rythm of the building and the placement of the vertical brickwork is well thought through. In the top he makes a real ending and between the ground floor and first floor he connects the windows with eachother.

VALUE ASSESSMENT

Positive value

The composition of the façade gives the building the character it has. Therefore are the main elements of the façade, such as the presence of the balconies. This does not mean that all the façades have to stay the way it is. It means that the characteristic elements of the façade should be considered when making a design.

The use of brick is something unique for the way Joop van Stigt used to work. He took the characteristics of the city into consideration when choosing the materialisation. He even took it a step further with the details in the façade. Every detail was done in brick and according to the size of a single brick element. This is also why the windows are shaped the way it is and he choose the colours to fit within the whole brick façade. With the use of brick, it all comes together.

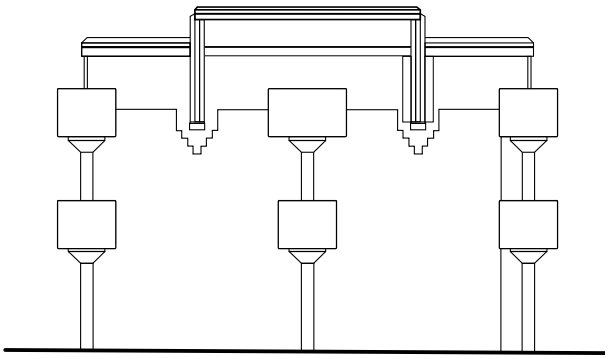
The columns are a dominant part of the façade and the overall layout of the builing. This is visable in the way the building is constructed, but also visable in the façade itself. On top of these Joop van Stigt has design these round balconies which are quite dominant in the façade.Another element which is valued high is the wooden roof. In the details as shown in the building technology part, one can see that he has thought about the different ways of finishing this design. However, he has designed this wooden roof like this to show that the building has room for extensions. With this in mind, not all the wooden roofs are valued this high, but as an element it is valued high.

Composition

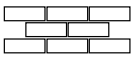
The overall composition of the different buildings are valued high. Joop van Stigt has designed the seperate buildings almost in the same way, but he added a layer of hierarchy into the composition by playing with the different hights. This way he created a hierachy within the buildings. Another aspect about the urban composition which we have valued as positive is the position of the two squares. This is an aspect that has a close relation with its surroundings and Joop van Stigt has payed well attention en focus to the position of these two squares.

Interior

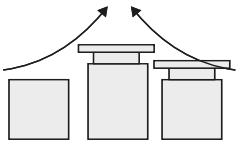
The furnitures which are designed by van Stigt for this building and the wooden ceiling with the lights integrated have high value because of the originality.



Composition main elements façade

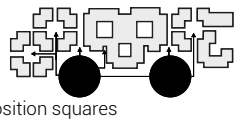


Use of brick

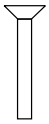


Hierarchy in buildings

Balconies



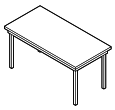
Position squares



Columns

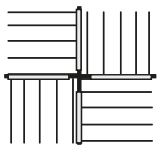
Wooden roof

Façade decoration



Furniture by Joop van Stigt

Window shape/ colour



Wooden ceiling

figure 131. Positive valued aspects

Indifferent value

Joop van Stigt has designed this complex as seperate building blocks where each has its own entrance to the building. To move from one building to another, one has walk the walkingbridges in between the buildings.
When looking at the use of the building, it is hard to controle the high amount of entrances. It also obstructs the social interaction which was meant by Joop van Stigt. This because of the fact that people enter a building and stay there. When they need to move towards another building, they simply use the entrance and not the walkingbridges. This is the part where the artistic value and the use value causes a dilemma. Therefor it is valued as indifferent.

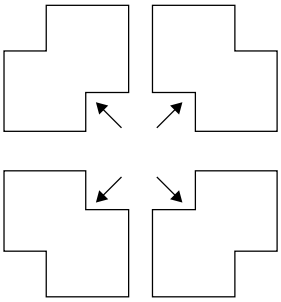
The courtyards in the overall composition are valued indifferent. This has to do with the fact that tthe design contains good elements but it does not function properly. It is possible to value it as positive due to the fact that it has a relation with the city centre of Leiden. However, it is not designed properly as a courtyard and lacks in the design and useable aspects. Therefore it needs to be designed in a way that adds value to the building instead of decreasing the value.

The building is designed as an open ended building. In the original design Joop van Stigt has designed the whole in a way to become changeable. He wanted the building to be addaptable from the inside. Therefore, the walls as they are now, have an indifferent value.

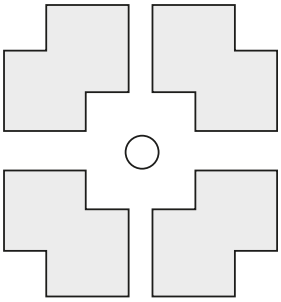
Negative value

Due to climatical issues and the change of the current energy demand and use, the building installations and the current windowframes are valued as negative. These are the elements which have to change either way.

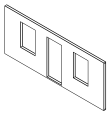
As stated before, the position of the squares are valued as positive. However, it does not function as a square. More as a place to put your bike and move towards your destination. With a change in the design of the square, it can be easily addapted to square that functions the way it was meant to; as a place to create possibilities for social interaction.



Entrances



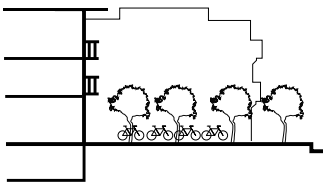
Design Courtyard



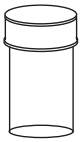
Innerwalls

figure 132. Indifferent valued aspects

Windowframes



Design square and garage



Building intallations

figure 133. Negative valued aspects

Books

Cullen, G. (1960), *The consice townscape,* Architectural Press: Princeton.
Hertzberger, H. (2014), *Architecture and structuralism,* nai010: Rotterdam.
Jacobs, J. (1961), *The death and life of great American cities,* Vitage books: New York.
Lynch, K. (1960), *The image of the city,* Harvard University Press: Cambridge.
Rossi, A. (1966), *The architecture of the city,* MIT Press: Boston.
Steenhuis, M. (2014), *Joop van Stigt, architect.* Stichting Dogon Onderwijs: Amsterdam.
Van Stigt, J. (1999), *Cultuur en techniek zijn bepalend voor de architectuur. Een land, een volk dat zijn cultuurbezit afbreekt heeft geen toekomst.* TU Delft: Delft.

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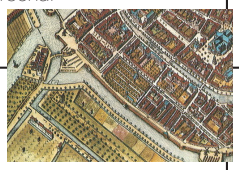
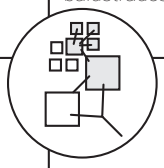
List of figures / FACULTY OF HUMANITIES

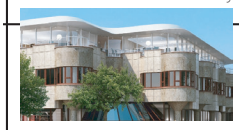
Images are made personally, except when mentioned below:

Fig 1. Retrieved from: Google Maps on 09-04-18; edited by Jelle Hettema
Fig 3. Retrieved from: https://www.britannica.com/biography/Ferdinand-de-Saussure on 02-03-2018
Fig 4. Retrieved from: https://www.globalresearch.ca/claude-l-vi-strauss-obituary/15933 on 10-03-2018
Fig 5. Retrieved from: http://www.team10online.org/team10/eyck/ on 10-03-2018
Fig 6. Retrieved from: https://andysworldjourneys.com/2015/09/11/dogon-village-mali/ 25-03-2018
Fig. 8 Retrieved from: http://socks-studio.com/2015/10/29/the-free-university-of-berlin-candilis-josic-woods-and-schiedhelm-1963/ on 10-03-2018
Fig 17. Retrieved from: https://architectenweb.nl/nieuws/artikel.aspx?ID=35438

APENDIX I

VALLUE ASSESSMENT. / Matrix

RIEGL / BRAND	Age Value	Historical Value	Non intended commemorative Value	Use Value
Surroundings / Setting	Historical site with Witte Singel, Trekvliet, Doelenterrein and Arsenal 	Oldest University in the Netherlands restoring Trekvliet		Educational Campus Faculty's parking
Site		Last new building of JvStigt Squares resemble historic architype Expandability in 'mushroom' garden		Circulation through alleyways
Skin (exterior)		Use of brick to resemble city centre  Only 'designed' brick facade of JvStigt		
Structure				Can still carry two extra levels Open floorplan
Space Plan				Researchers have their own space Circulation via outside balustrades 
Surfaces (interior)		Concrete brick, popular during the '70s 		Low maintanance concrete bricks
Services				
Stuff	Original iMac	Original JvStigt furniture		
Spirit of Time		Place in development of Dutch structuralism		

Newness Value	Artistic Value	Rarity Value	Conflict
	Five architects collaborating Water in front and back		Bridges not realised Van Stigt anticipated a different urban plan
7,2 x 7,2 m unit Asian library 	Several units Hierarchy in buildings		
	Precise stacking of bricks Glass top floor	Only brick facade of JvStigts new buildings Precise stacking of bricks	
	Wooden construction on top Rounded 'mushroom' columns		Thermal bridges
New garage flooring Try-outs new floorplan	45° dooropening Rounded balconies Linoleum flooring		People get lost Single elevator
	Wooden ceiling Washed concrete Brick flooring in central hall		Concrete brick, popular during the '70s
Natural and mechanical ventitalion	Purple ducts	Incorporated fluorescent lighting	Heatloss Limited space for shafts and ducts Small toilets
New furniture	Original wooden stairs by JvStigt Original JvStigt furniture	Original JvStigt furniture Special papyrus rolls	
	Open ended structure Building as a city repeated buildings.		Social interaction less than intended

APPENDIX II

CONTEXT. / Images

SQUARE. / Aalmarkt




SQUARE. / Faculty of Humanities


COURTYARD. / Eva van Hoogeveenhof

COURTYARD. / Faculty of Humanities

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