

Niels Vernooij

Since I was young I pictured myself being an architect. During the many years of education and studying this goal remained. Hobbies and interests adapted but as a whole the practice of architecture seem to include all the ingredients which together form a way a thinking and the use of creativity fitting my personality.

I experienced the bachelor as a period in which I learned the necessary basics of building engineering, meanwhile confirming my interest in the direction of architecture. The master felt as the right place and the right setting to get to know with the practice of designing. Especially the quest for the underlying question and the conceptual approach I experienced as a relief during the design processes.

After my studies I gained professional experience by working for a variation of large scale projects in a leading practice, as a designer/engineer in definitive-, technical and execution design. Here I came to the realization that I like to work in a more personal setting dealing with projects which focusses on challenges faced by our generation within the practice of architecture.

Cheerful, easy-going, sensible and serious define me as a person.



RESUME

Niels Vernooij

Nationality: Dutch

Date of birth: 11 October 1990 Phone: (+31)(0)681244386 Email: ngsvernooy@hotmail.com

Education

Technical University of Eindhoven (TU/e) 2013 - 2016

TU/e Master Degree in Architecture Building & Planning

HAN

TOYOTA

Specialization: 'Architecture'

Graduation Studio: 'Architecture, Brand & Sustainability' Committee: prof. ir. J. D. Bekkering, ir. Sjef van Hoof,

Dr. dipl.-ing. Torsten Schroder

'H&M store as a new type of public space' Project:

2009 - 2013 University of Applied Sciences Arnhem & Nijmegen (HAN)

> Bachelor Degree in Building Engineering Specialization: 'Architecture'

Graduation Project: 'Redevelopment of Castle Ruin Blijenbeek'

Secondary School 'Rembrandt College' 2003 - 2009

Diploma Scientific Lyceum (vwo)

Specialization: 'Nature & Biology'

Employment history

Educational related:

2018 - 2018 Junior Architect RU+PA

at Rudy Uytenhaak + Partners Architecten 1 month -- Revit -- technical drawer & designer

Junior Architect 2017 - 2018

at KAAN Architecten

19 months - Revit - technical drawer & BIM Modeler in

definitive- & technical design phase.

Intern: technical drawer/BIM Modeler 2012 - 2012

at Van den Berg groep

6 months internship -- Revit & Autocad -- design and execution phase.

Intern: preparation work for building contractor 2010 - 2011

at Timmer- en aannemersbedrijf G.M. van de Waal

3 months internship - Autocad - execution phase, calculation, building site.

Intern: technical drawer 2010 - 2010

at Ter Braak Architecten

3 months internship - Sketchup & Autocad - design phase & visualizations.

Interest related:

Professional Driver 2012 - 2016 bouwens&

at Bouwens&: Driver & Facility services

Driving boardmembers and managers comfortable to their meetings accuracy-, hospitality-, social communication-skills - +/- 300 assigments.

2006 - 2012 Allround employee of car dealership

at Van Hunnik Toyota Car Dealership

Large variety of activities -- clean/ polish cars -- small repairs - client contact

Certificate 'Veiligheid voor Operationeel Leidinggevenden (VOL-VCA)' 2013 at Hogeschool of Arnhem & Nijmegen (HAN) Extracurricular activities Minor International Sustainable Development Cooperation (ISDC) 2012 HAN at University of Applied Sciences Arnhem & Nijmegen (HAN) educational programs - (intercultural) communication welfare and wellbeing in developing countries At the faculty of Behaviour, Health & Society I studied for one semester during my studies in Building Engineering. My aim was to gain a broader and more social perspective; so I sub merged myself for 6 months in the world of development cooperation, which included courses and an internship of 3 months in Uganda. A period which had a significant influence on my personal development. **Publications** 2016 'Architecture, Brand & Sustainability' Co-author of graduation project book, TU/e 'SEMINARCH 6: Thing Theory & Urban Objects for the 2014 European Capital City: Kirchberg Plateau' Co-author of seminar book, TU/e Software Advanced: Autodesk Revit Autodesk Autocad Google Sketchup Medium: Adobe Indesign Adobe Illustrator Adobe Photoshop Basic: Microsoft Word Microsoft Powerpoint Languages Dutch Native: English Advanced: Interests

Architecture, design, music, photography, cars, arts, fitness, mountainbiking

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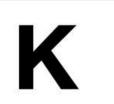
EDUCATION



description: master student ABP duration: 2013 - 2016 pages: 8 - 41

part 2

WORK



description: junior architect duration: 2017 - 2018 pages: 42 - 49

part 3

PERSONAL



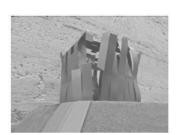
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EDUCATION PROJECTS

at TU/e



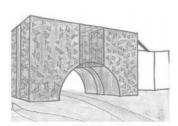
extension & analyse: The Rock



the cube



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design



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analyse Strijp-S Eindhoven



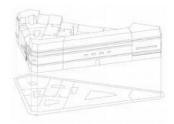
writing introduction to theory



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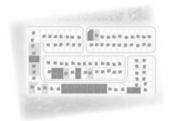
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architectural biography



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MAKE-OVER OF H&M

store as a new type of public space

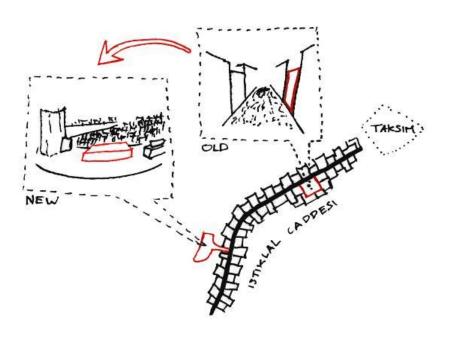
Graduation Project Studio "Architecture, brand and sustainability" TU/Eindhoven 2016 Tutors: ir. Sjef van Hoof; Dr. dipl.-ing. Torsten Schröder

The goal of the graduation studio has been to combine three controversial spheres in a single design proposal; Architecture, Brand & Sustainability. The project resulted in a cohesion, representing each of the terms in a developed concept.

The context of the project is the metropolis; the stage and natural habitat of an international brand. It is the place where it represents itself to the more and more international orientated society. Metropolises on the other hand suffers from many dangers created by the act of human beings. The natural environment is transformed into a man-made landscape orientated on generating money and offering services. The liveability tends to be neglected whereas this is not a direct source for money.

It is a challenge to create a brand building that actually contributes to the liveability in the city while representing and generating money. In this case branding can expand itself by offering a more meaningful addition to the public realm of the city.

The project is located in Istanbul, being a very lively and social diverse city dealing with many problems created by the intense growth of this Turkish super-spot. Commerce is very tangible in this city occupying every spot. One of the most impressive commercial hotspots is the centuries old Istiklal Caddesi, a street famous for its prestigious buildings and thereby representatives occupying them.



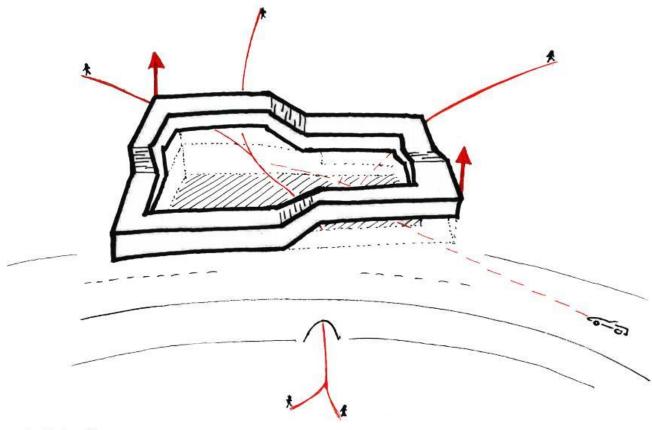


Image 2 Functioning of shape

Image 3 Urban context



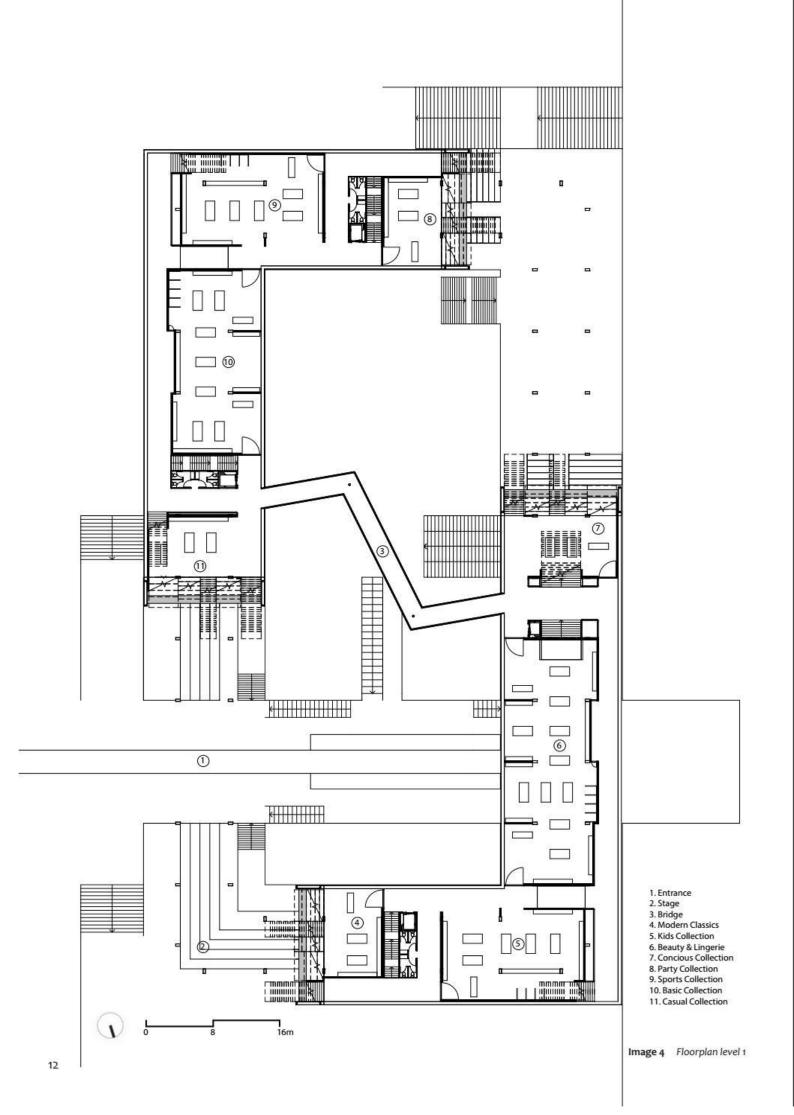




Image 5 Urban context

Image 6 Entrance from shoppingstreet





Image 7 Building a as catwalk

H&M store as a catwalk

The clothing industry is a debatable and unsustainable business which needs to be represented in a different way according to the changing philosophy of H&M, as being one of the biggest multinational fashion firms with over more than 3900 stores worldwide.

H&M states that sustainability is high on the agenda, and they send out an annual report proclaiming this. Nevertheless the building could emphasise on sustainable shopping behaviour and present this as an attractive way of acting for consumers.

The H&M stores are visually dominant, most of the time positioned on the hotspots of the city occupying a possible extend of the public space, as in the situation of Istanbul with the H&M on the Istiklal Caddesi.

The exterior of their stores is adapted to the local context, whereas the interior is repetitive in every store. The H&M store is a world on itself, where all the attention is paid to the clothes itself. So, while shopping on the Istiklal Caddesi, one of the most impressive and fascinating spots of Istanbul, the only thing that will be experienced is a generic interior repeated all over the world. It doesn't show any relation to Istanbul and as a consequence detaches the consumer from its actual place. By relating the design of the store more to its location the shopping experience and the store can become a more integrated element in the public network and can address services/facilities and experiences fitting in the urban network.

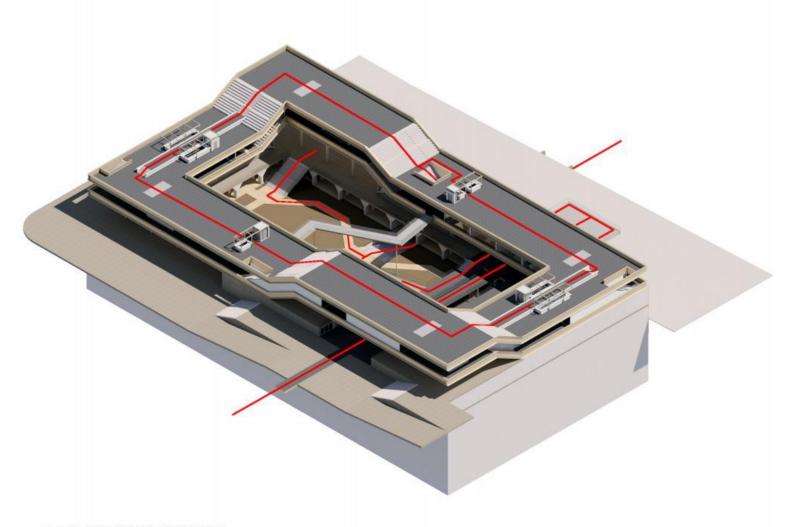
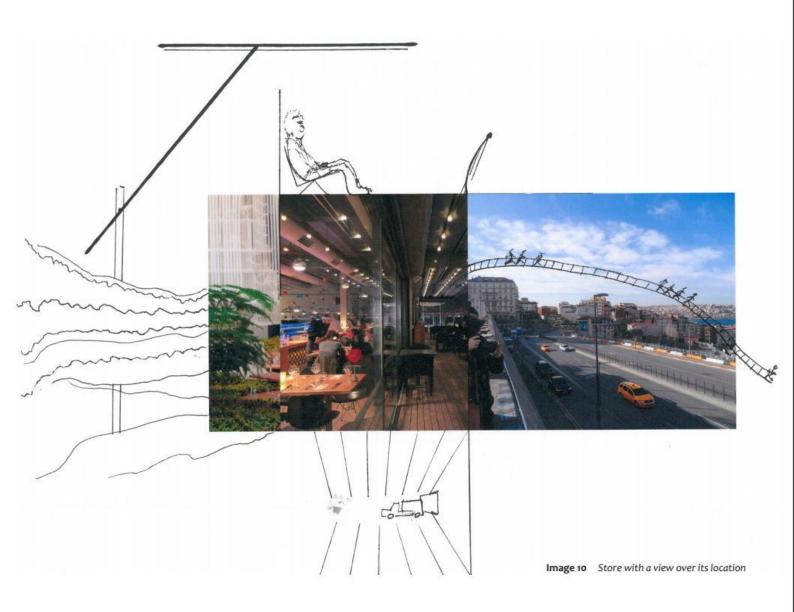


Image 8 Catwalk troughout the building

Image 9 Catwalk continues upon the roof





New functions on a new location

The Istiklal Caddesi, the current street of the H&M, is detached from the surrounding areas of the city centre, standing just outside this street offers a view all over Istanbul. One open space stands out because of its size and its location just next to the ring road, offering an overview of the old neighbourhoods, the Bosporus and the Asian side.

This location potentially could connect multiple areas, as a consequence the flow of people can come in contact with the new H&M.

The location of the building is treated as an extend of the public space being in symbiosis with the commercial service of H&M. It offers space for presentations, fashion shows and leisure which are all intended to physically connecting the consumers to H&M, in contrast to the online and digital advertisement.



Image 11 Eventspaces of the building

Image 12 Main venue for presentation and fashionshows



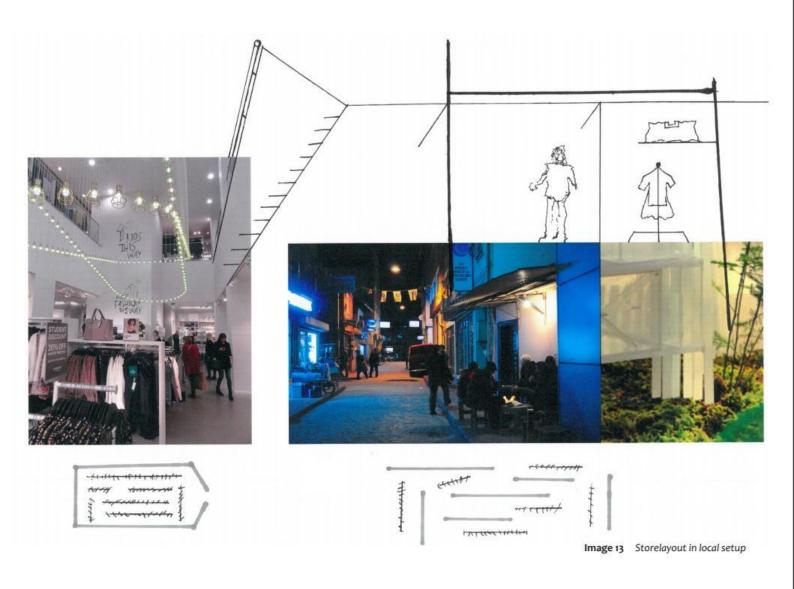
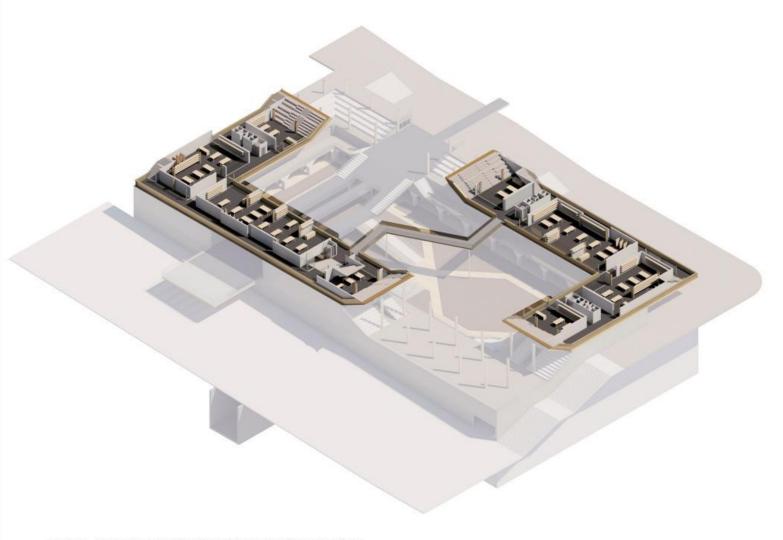


Image 14 Connection between store and the inner nature





 ${\bf Image~15} \quad {\bf Store~compartments~with~streets~translated~into~a~ring-shape}$

Image 16 Connection between store and Istanbul as its context





Image 17 Nature as a space and for improving the local climate

Integration of nature in the H&M

The integration of nature in the Austria pavilion on the Milan expo (2016) is in the context of H&M building an interesting case study, not only the nature is here to observe, the intention is to give the visitor an experience, the feeling of being immersed in a totally different and precious space. The combination between nature and technology makes the nature even more benefiting for the local environment.

In the design for the H&M building this concept of nature will be implemented to naturally cool the building and to create a more healthy micro-climate, in contrast to the decreased air quality and heat of this area of Istanbul.



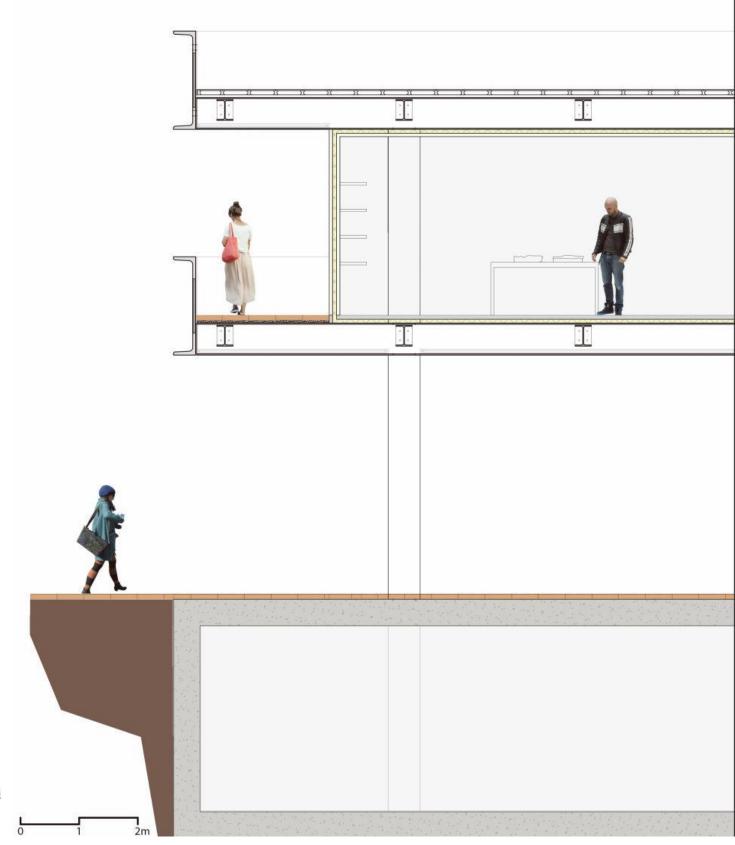
Image 18 Nature centralised in the building

Image 19 Entering the H&M



Engineering

The building is positioned upon a concrete parking garage. It is constructed by making use of spaciously designed steel structure. The store departments consist of free-standing walls, wooden roll doors towards the nature and glass facades next to the routing for entering the stores throughout the shopping-floor. On the roof en the routing towards the building energy generating floors are applied. The floorelements generate energy by movement or by functioning as solarpanels.





SCENE SCENARIO

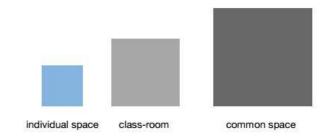
Master project 2 in collaboration with Tamar Tsanava Studio "School with Scenario" TU/Eindhoven 2016 Tutors: Mark Hemel; Barbara Kuijt

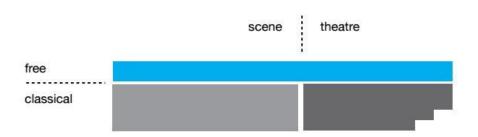
are close by.

The presented project is the design and vision of a school, a design according to the philosophy concerning free and classical school. The design is manifested after taking into account all the meaningful interventions focused on both school philosophies.

This project believes in the value of the classical school, but creates a stage for the individual's self-expressive behaviour. By constructing the school as a stage it offers constant change between observer, in the theatre, and user, in school. The theatre becomes a place to observe school as a scene where wings with different activities gather.

The design takes the context in account. The plot of the school is situated in an area which is famous because of his former shipyards, local shops and existing neighbourhoods





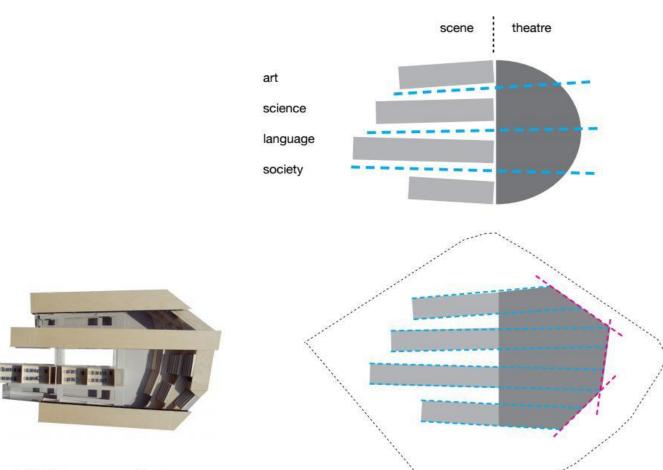
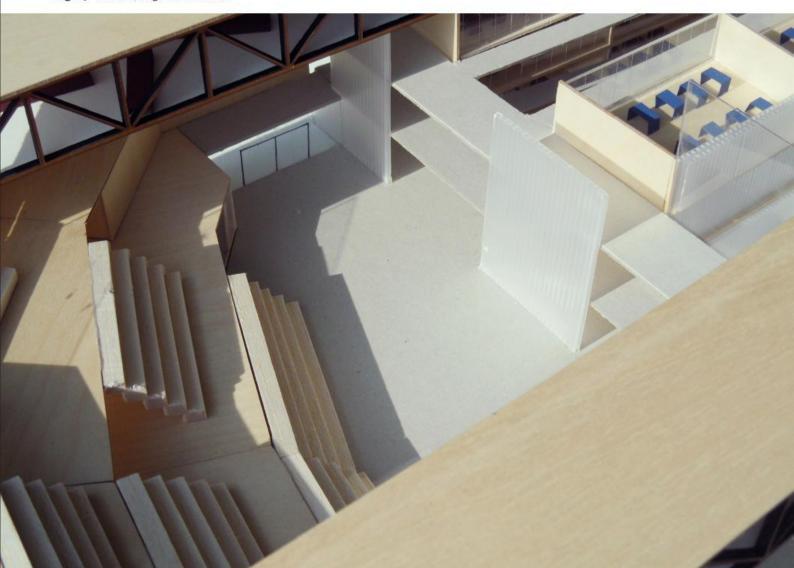
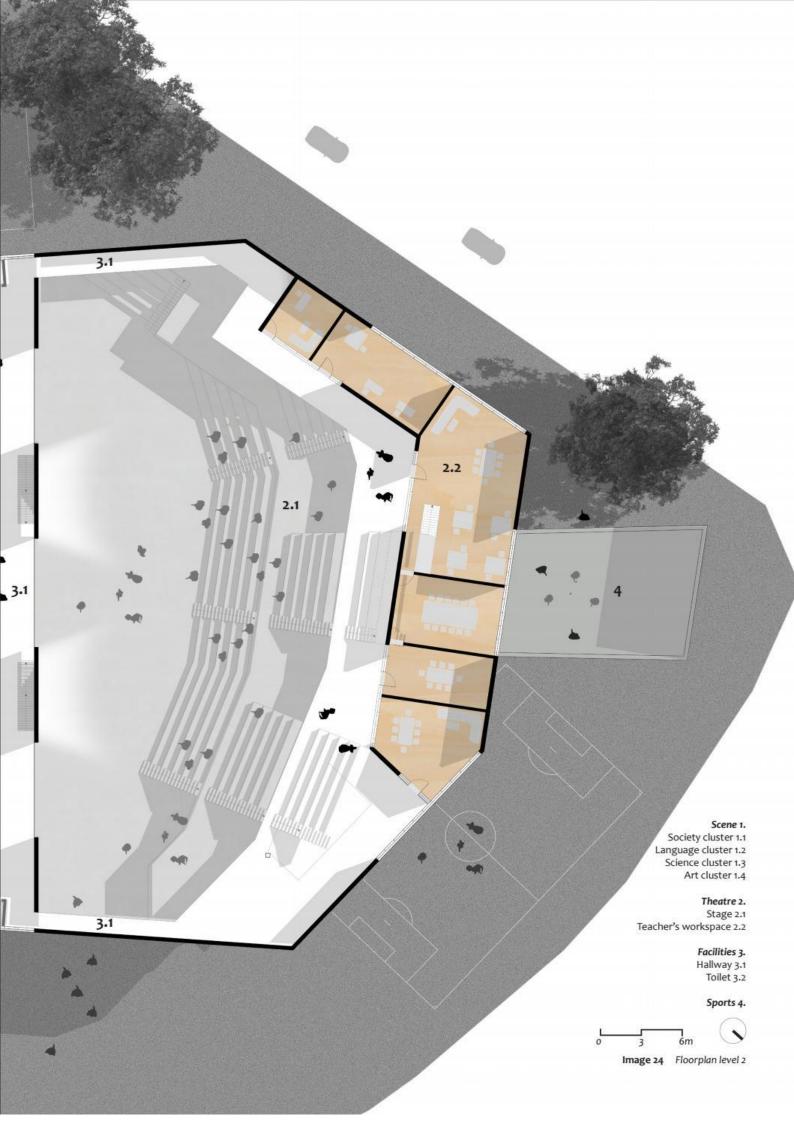


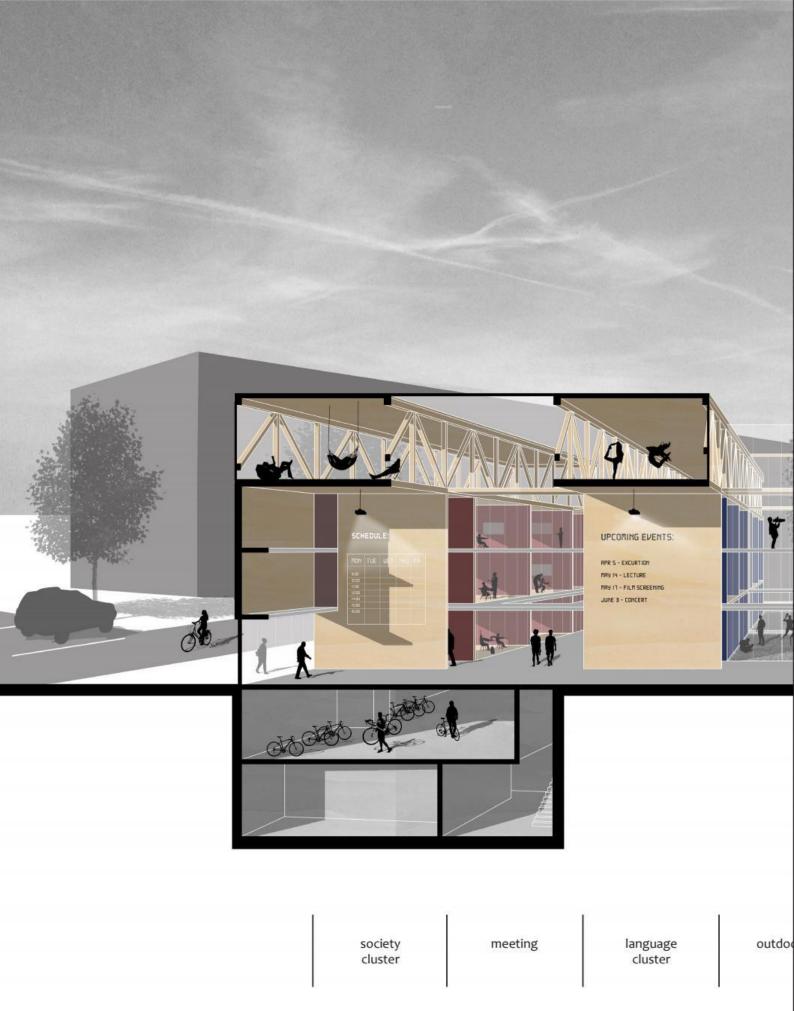
Image 22 Relation between scene and theatre

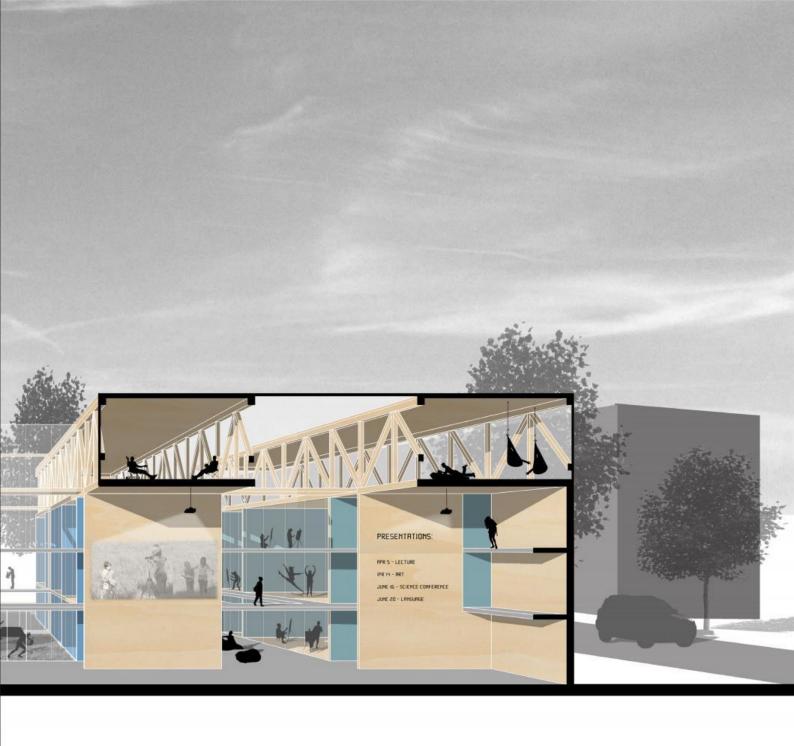
Image 23 Entrance, stage and its clusters











meeting or sports art science cluster cluster



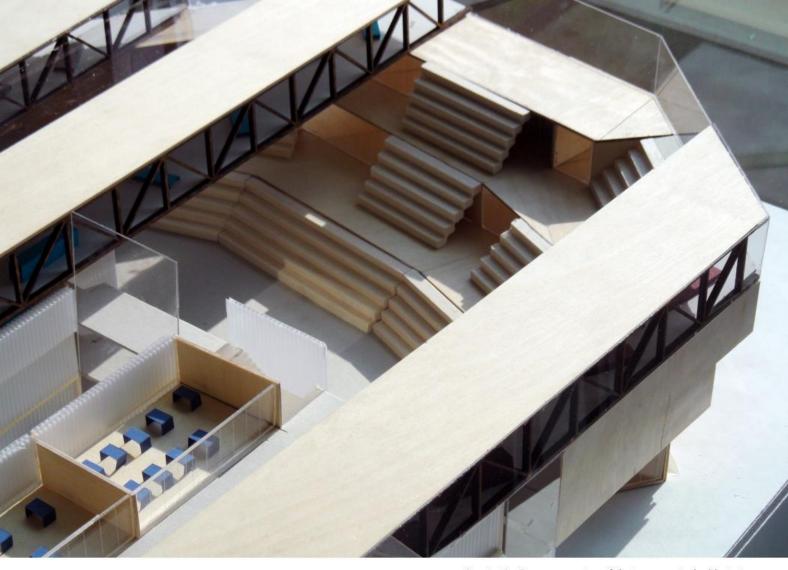


Image 26 Free spaces on top of clusters connected with stage

Image 27 Stage connected with the teacher's workspaces

REPRODUCE DETAIL

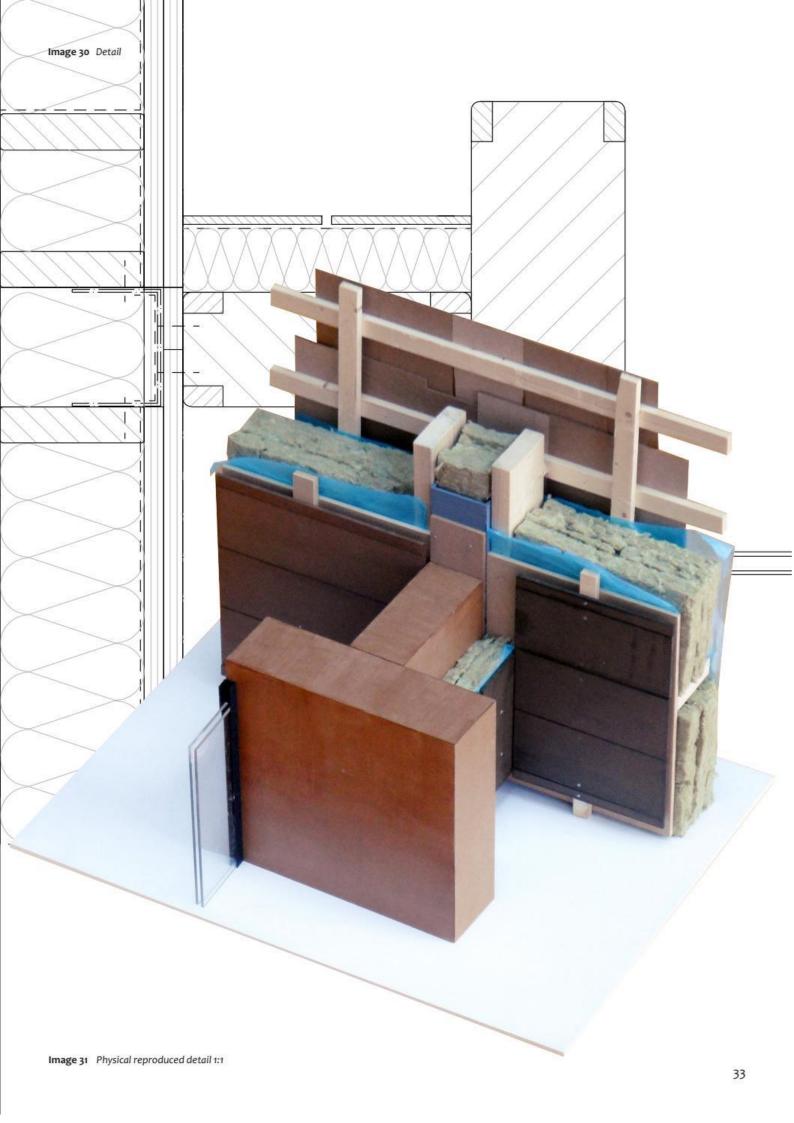
Architecure & Engineering: Production & Parts TU/Eindhoven 2015
Tutor: Jan Schevers

Research

The course Architecture & Engineering was mainly focused on the make-ability of an architectural project. The first assignment was to remake a 1:1 detail of an existing building wherein the materialisation is as an inspiration for the second assignment. The building which we analysed was the conference center Mennorode in Elspeet (NL).

Goal of the second assignment was to individually create an architectural object in which the project starts from the material and the constructing process to result in a functional, comfortable and attractive space. This will be explained on the following pages.





DEMOUNTABLE PAVILION

Make-ability

The assignment came with the following restrictions: The movable pavilion has a size around 200m2 and offers space for exhibitions and work-shops. The building offers a comfortable climate and is designed so it can move once a year from it conventional space next to Vertigo at the TUe Campus to the Stadhuisplein in the citycenter of Eindhoven during the DDW.

Key drivers of his project:

- Wood as the main building material, as being lightweight and adjustable.
- 2. An easily demountable building which expresses mobility.
- A spacious building that consists of an interesting construction method.

Materials

The pavilion is constructed by using the principle of an arch, as an arch is capable of combining the wall and ceiling. The design intented a single floor pavilion which is spacious & versatile.

The building is founded by concrete beams, it offers a rigid and heavy basis for the arch.

A temporary demountable steel structure will be used to create an arch offering a surface to construct the real arch on.

Arch elements are constructed with laminated beams. The material is strong and relatively light, can be produced in an arch shape and helps with creating the right atmosphere. Wood is also used for the floor and facades, so all the space around the user is constructed by wood.

Instead of glass there will be made use of Plexiglas, the material is light and strong, so it is more suitable for moving. The arch elements together create a load which automatically strengthens the arch, still the elements need to be fixated with metal profiles so the building will not collapse by movement. The metal profiles also serve for the cover of the pavilion by making use of an EFTE membrane protecting against weather influences, preventing heating up and while still transfer light. The membrane can be cleaned and functions for at least a decade.

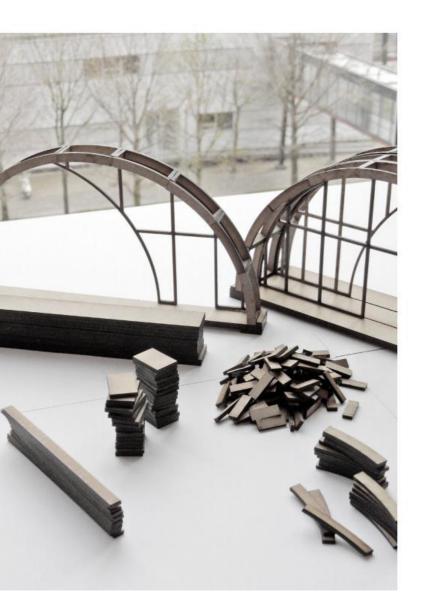




Image 33 Phase 1 + concrete beams + temporary steel structure + elements + steel profiles



Image 34 Phase 2 + removal steel structure

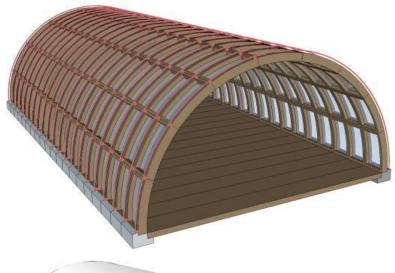


Image 35 Phase 3 + metal cable

+ floor elements



Image 36 Phase 4 + EFTE membrane + inner facades

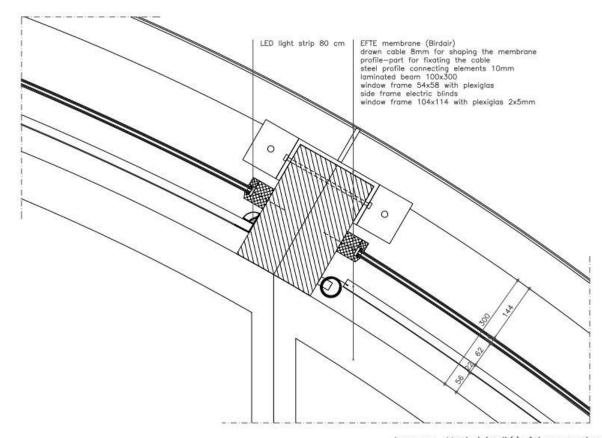


Image 37 Vertical detail (1) of the connection of ellements

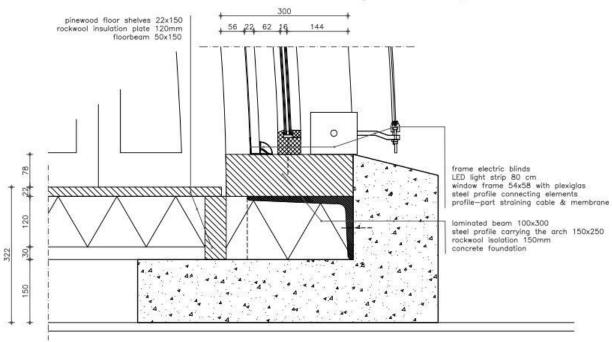


Image 38 Vertical detail (2) at floorlevel

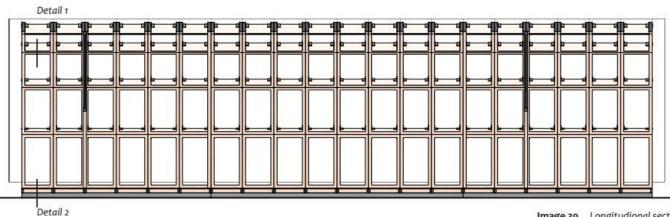
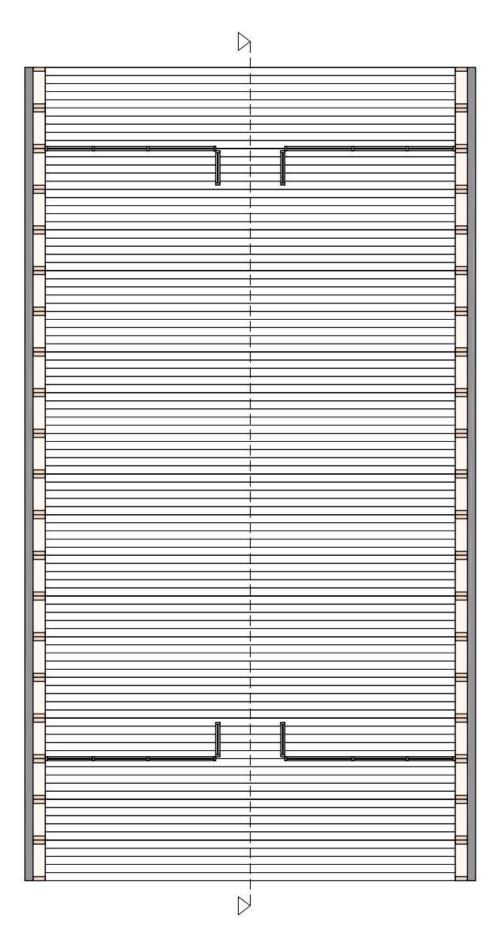


Image 39 Longitudional section



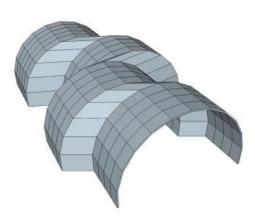


Image 41 DDW setup with moved volumes

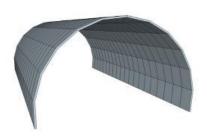


Image 41 TU/e setup as one volume





MATERIALISATION

how does the architecture of Mies van der Rohe matter?

Architecture & Philosophy TU/Eindhoven 2014 Tutor: Jacob Voorthuis

Relation between material and architecture

For the course Architecture & Philosophy I was asked to write an essay about a theme within my own interest. I decided to write an essay about materialisation; in specific material as a way of convincing of a certain architecture. I was interested in the relationship of these two subjects. By using the German Pavilion in Barcelona as the main reference I tried to find out in which way the materialisation influences the expressing of the architecture of Mies van der Rohe; his architecture is highlighted in this essay because of the exceptional use of materials.

RQ: What relationship do the materials and the architecture have in case of the Barcelona Pavilion designed by Mies van der Rohe?

Strategy

The essay is underpinned by information provided by two books: Mies van der Rohe – Critical essays by Frans Schulze and The Artless Word – Mies van der Rohe on the Building Art by Fritz Neumeyer. The first book contains multiple critical essays of different authors related to Rohe his architecture, the second book is about his oeuvre.

In the essay I imagine the situation in which the pavilion is constructed by making use of basic building materials. Is the original concept in this situation still successful? Does it still reveal the characteristics that Mies van der Rohe intended for the German Pavilion?

The essay is constructed in the following order: First I discovered the architectural vision of van der Rohe, after that I got into the background and the intensions of his philosophical position and this eventually resulted in questioning myself how this all has to do with 'creating space' according to Van der Rohe. By getting into the materialization and the construction it was possible to get a thorough view about the Pavilion. This created possibilities to say something about the influence of the used materials and the result, of the in the essay suggested, alternative materials.

Conclusion

The result of replacing the original materials with bricks, concrete and simple beams made clear that it would enrich the experience of minimalistic architecture. In notification that the size of the materials and their reflective qualities also have an influence on this. But imagine, the Pavilion with the alternative basic materials, on the World Exposition in Barcelona, what will go through the mind of the observer and visitor? My final statement is that the exceptional materials help conveying the design principles of van der Rohe in the design of the Barcelona Pavilion, it activates the mental processes of the visitor. When there is made use of more basic materials, the alternative as presented in the essay, I suspect the train of thought will not be triggered. The Pavilion, in its original design, is more acceptable and comfortable for the visitor, because of the Pavilion's accessibility the visitor has the opportunity to experience what architecture could be like in the future.

Outlines

Architecture

What are the direct consequences of his architecture for the materialisation, and the other way around? Getting rid of the ornaments and leaving the idea of rooms doesn't mean that it becomes bad architecture. The modernist agreed on the fact that simplifying the architecture resulted in the essence as it belonged to be. Does it help simplifying the material, so the architecture gets closer to the essence? In case of the Pavilion the extensively rich materials may distracts this goal, creating an unclear message. Is the rich material a way of making the minimalism more acceptable, would real minimalism be too extreme for an event as the World Exhibition in Barcelona?

Space

The theory about space is confirming that other aspects became more important for designing the Pavilion. Besides the philosophical contribution, creating space takes in an important position. But what has the materialisation to do with creating space? The materials on itself overwhelm and rule the visitor, it makes the visitor more aware of the setting he is part off, the effect can be that the observer thinks more about the actual meaning of the building elements the materials form. Element which all together create the intended space according to the theory of van der Rohe.

Material & construction

Are these luxurious materials distractive, or do they empower de minimalistic architecture? In the different essays the materialisation seems to become one of the main qualities of the Pavilion. But showing its richness, is that an intended quality for Mies van der Rohe. Doesn't he especially want to create a new way of minimalistic architecture where space is created with materials instead of the other way around? When we imagine the same Pavilion but then composed by concrete, bricks and simple effective beams, what would the outcome be? It would support the minimalistic intentions, but in despite I expect it will ask for a lot of imagination of the observer. Besides that there is something to say about the dimensions of the materials, big slabs of marble are with their size more quietly than a lot of small bricks. The detailing of the marble support the illusion created for the observer, an illusion that wants to empower the idea of one big solid wall of marble, an un-imaginary way of constructing a wall during that time.



Image 43 The relation between the architecture and the material



Image 44 Delimited exterior space with marble walls and shimmering window frames and colums.



Image 45 Interior space with marble walls and shimmering window frames



definitive design





Paleis Het Loo, Apeldoorn > p. 44 Zalmhaven, Rotterdam > p. 46

technical design



Paleis Het Loo, Apeldoorn > p. 44

execution design



Koninklijk Museum Schone Kunsten Antwerpen > p. 48

PALEIS HET LOO

renovation, renewal and expansion of the museum

Function: Museum

Location: Apeldoorn, Netherlands

Period: 2015 - 2021
Size: 5000 m²
Project architect: Dikkie Scipio
Project leader: Loes Martens

Team size: 9

Originally built as a hunting lodge of the royal family in 1686, the palace continued its life as a museum from of 1984. In the beginning of 2016 the proposal designed by KAAN, in which an underground expansion is introduced, has been chosen by the jury. The demand of an expansion originates from the request of improved public facilities, increased temporary exhibition space and room to present their large collection. According to the initial planning the renovation and expansion started in 2018, where delivery will take until 2021. Besides the expansion the palace will be exposed to a large renovation; the technical- and climate-installations will be replaced, next to a large removal of asbestos.

During my period at this project I have been working on technical drawings in both the definitive- and technical design phase. By using Revit, and in some exceptions Autocad, we have been working together with other disciplines in one large 3D-model. It has been a very interesting period, in which a complex project developed itself in high speed by high precision. Many design decisions have been made during this process, in which for me it resulted as a very instructive trajectory. Reason to follow these developments was my position to complement and expand the Revit-model, and to have occasionally contact with the other disciplines. After finishing the technical design phase, whereby the contractors were capable of pricing the project I continued by working for the residential complex Zalmhaven.

Activities:

- BIM Modelling (Revit)
- Definitive- and technical design drawings



Image 46 Front view of palace



 ${\bf Image~47} \ \ {\bf Implementation~of~glass\text{-}roof~facilitating~the~underground~expansion}$

Image 48 Grand-foyer in underground expansion



ZALMHAVEN

residential complex

Function: Residential complex Location: Rotterdam, Netherlands

Period: 2000 - 2020
Size: 35.000 m²
Project architect: Kees Kaan

Project leader: Aldo Trim / Allard Assies

Team size: 7

On the north-bank of the river Maas, alongside the Erasmusbrug, a significant block is being designed. It consist of an unusual high residential tower (215m) and two mid-rise towers (70m) on top of a plinth.

The design-task of KAAN consists of the two mid-rise towers which together contain 220 apartments. The design responds to different scales: the city scale and the scale of the neighbourhood. By the incorporation of multi-leveled housing, which are individually connected to outside, the design focusses on involvement of the residents with their adjacent street. In addition, the residents of the plinth and the towers, will share a communal roof garden on top of the plinth. The overall-project, presented in 2004, caused resistance by local residents, which resulted in long-term delay of the project. According to initial planning the project has to start in 2018 resulting in delivery in 2021.

During this project, together with a team member, I was responsible for developing the detailing up to the next level. A couple of building-request details in Autocad needed to be drawn in Revit, and in addition many new details have been drawn up to the level of definitive design. During this process I received guidance of a senior engineer and my project leader.

In contrast to Paleis Het Loo, this project doesn't consist of any existing structures, and as a consequence we focussed on limiting the variation in detailing. This resulted in detailing with frequent repetition throughout the building. By having a closer look at the process another difference, compared to previous project, appears; during the Zalmhaven project I experienced the presence of a constructor during designing even before technical design, which asks for another approach in execution solutions and in communication.

Activities:

- Working with BIM-Model (Revit)
- Definitive design (detailling)



Image 49 Overall block



Image 50 Entrance to tower-appartements

Image 51 Communal roof garden



KONINKLIJK MUSEUM SCHONE KUNSTEN ANTWERPEN

renovation en expansion of the museum

Function: Royal Museum of Fine Arts Location: Antwerpen, Belgium

Period: 2010 - 2020

Size: 20.500 m² (phase 1)/

26.500 m2 (phase 2)

Project architect: Dikkie Scipio

Project leader: Walter Hoogerwerf

Team size: 4

At the end of the 19th century (1890) the building has been erected serving immediately its purpose as museum. About a century later, at the beginning of the 21th century, the building urgently requested for a thorough renovation and, out of organisational need, an increased amount of exhibition space. Claus en Kaan has been selected in 2004 to design a master plan, of which the current design is its immediate result. Conclusions which have been drawn out of the master plan are the neglected maintenance and the absence of possibilities for the accessibility of the current collection.

The original façade will remain untouched, whereas on the inside new volumes will be inserted replacing the former patios. In contrast to the existing exhibition spaces the inserted volumes will introduce a new type of exhibition space which is modern and bright.

Overall the expansion will respect the original design of the museum, which is highly valued.

The project suffered from delays out of unexpected developments which results in a delivery presumably 2020.

In this project I have been challenged to correctly implement the security installation corresponding with the spatial usage of the museum and the necessary escape plan in case of emergency. Another company was in charge of serving the correct output, but this unfortunately had to be corrected extensively regarding the design and the existing situation of the museum. This process resulted in a book visualising all the doors which became eventually part of the security installation. This book describes the necessary elements, conditions and other requests relating to the execution of all the openings. In short my focus was; Bringing order in all the information which origins from multiple resources and disciplines, while focussing on the eventual visual outcome in the museum.

Activities:

- execution design (documenting)
- implementing security installation
- considering escape plan
- considering existing situation

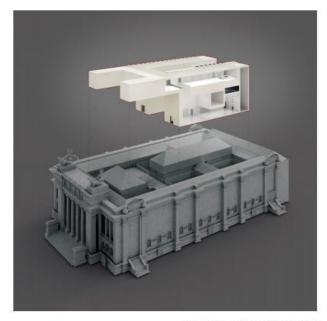
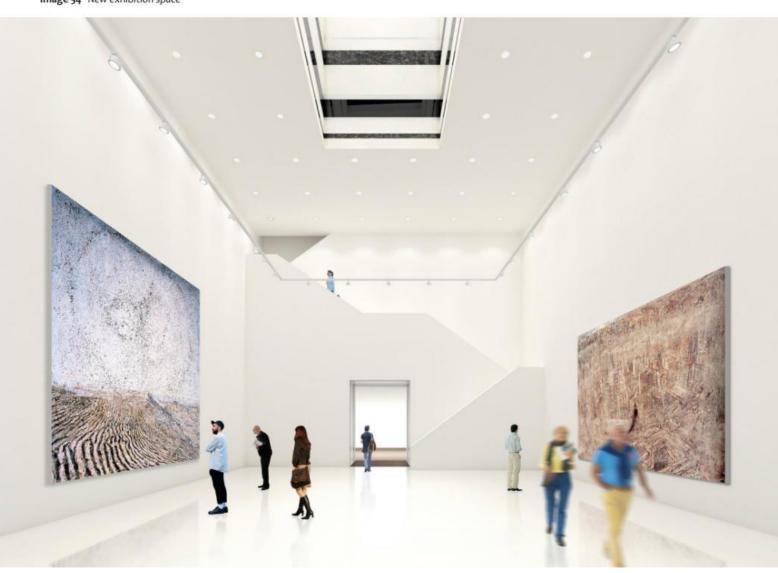


Image 52 Expansion concept



Image 53 Urban context
Image 54 New exhibition space



PHOTOGRAPHY

In addition to work created in school- and professional environment I like to show photos taken during work, trips and visits in my spare time. I enjoy myself discovering the outskirts of the Netherlands and international places which I come in contact with. In these situations I challenge myself to find the right frames and the beauty in the everyday situations. A small selection is presented on the following pages.



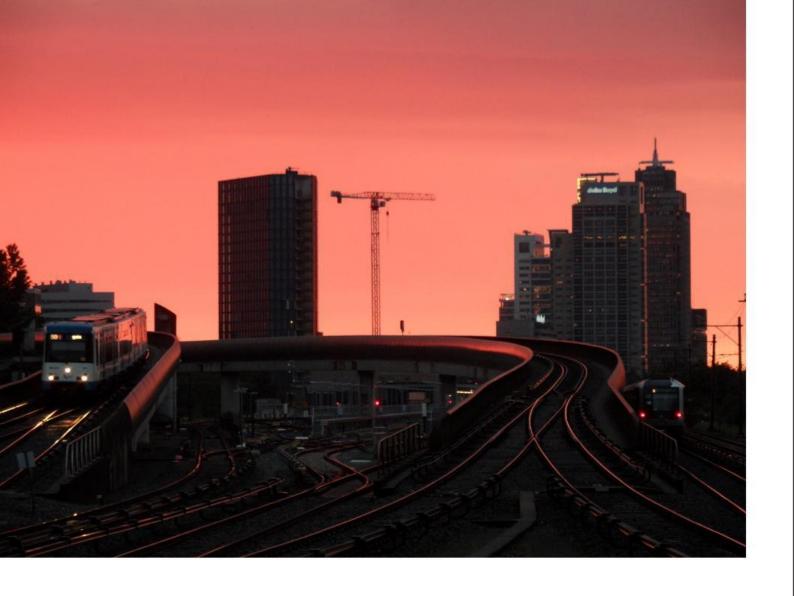






Image 58 (up) Centrumeiland (IJburg), Amsterdam, 2018 Image 59 (right) Westrandweg, Amsterdam, 2017 Image 60 (down) Siberiastraat, Antwerpen (Belgium), 2018



