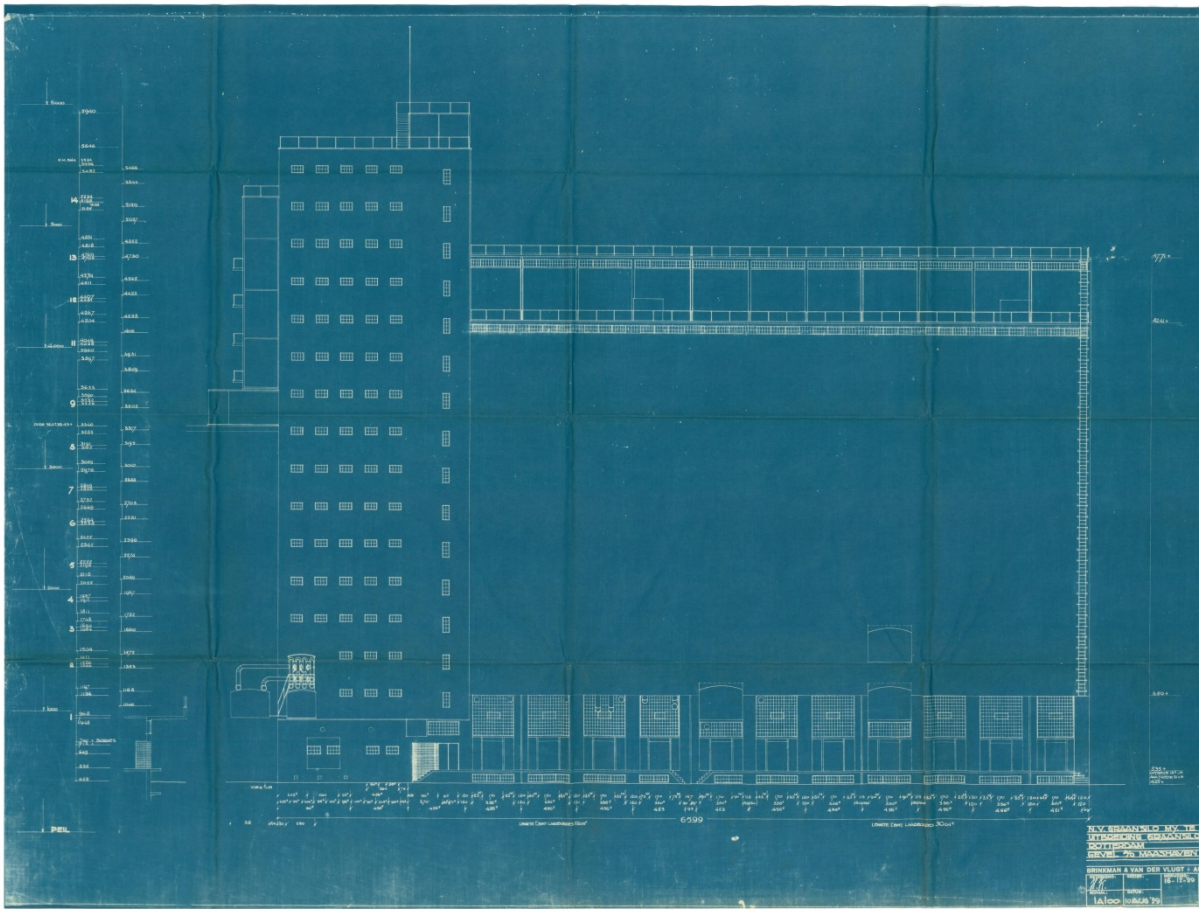

CV RAPPORT

KOEN HOOGEVEEN

MSC3 ROTTERDAM HARBOR STUDIO

DR. S. A. STROUX

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Introduction

During the first two phases of the project studio Rotterdam Harbor Studio we were asked to research different aspects of our chosen building, like the urban context, technical details such as structure as well as previous activities and the architects of the buildings. Alongside this research we were also asked to use the information that we were gathering to compile a report about the values of the building.

To carry out this research on the building we were introduced to the concept of value assessment and the value matrix by Marieke Kuipers. All the knowledge that we gained from research was put in perspective in this matrix, to come to a set of clear and critical conclusion for a redesign. Since the ascribed values are impossible to put under one common denominator, they are divided into multiple categories. The division in categories is in this case provided by Alois Riegl. In his The modern cult of monuments: its essence and its development, the following cultural values can be found:

• Age value: The extent to which existence through time, and therefore physical decay, is made visible. This value is perceived immediately by both laymen and experts.

• Historical value: The extent to which valuable information about the past is provided. This information is mostly valued by experts and in most cases has to be explained to laymen.

• Intentional commemorative value: Value in the human endeavor to keep certain memories alive in the consciousness of the public.

• Unintentional commemorative value: Appreciation of the readability of unintended events in history that became part of the public consciousness.

• Newness value: The extent to which the triumph over the test of time is visibly present. This is the exact opposite of age value.

• Art value: The value of artistic meaning in historic artifacts.

• Use value: The extent to which certain aspects in the current situation are directly adaptable for new usage.

To get a better understanding how these values correspond with each other or oppose each other we composed a value matrix that measures the values according to level of scale.

The matrix provided a helpful structure for the analysis on the building and its surroundings on every scale. The different methodologies that we applied resulted in knowledge that could then be inserted into this cultural value matrix. It was a helpful tool to see these different aspects and there values in perspective. It allowed us to get a better understanding of the hierarchy of the importance of values.

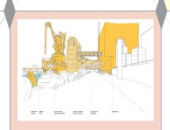
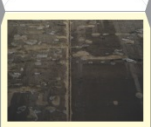
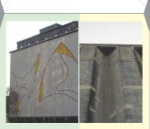
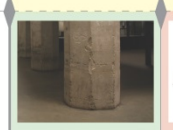
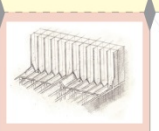
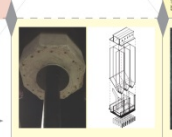
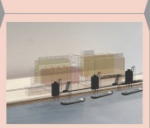
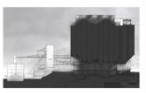
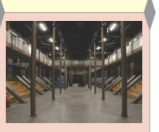
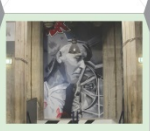
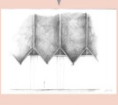
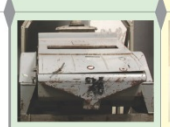
From this matrix and composed values we had to create a few bold statements that summarized the most important values of the building which should have been taken into consideration as how to approach the building with your design as well as what is possible.

In this report I will try to explain how these statements/values came to be and how I used them for my own re-design of the Maassilo. And how these statements may have changed further in the process of the design.

CULTURAL VALUE MATRIX

VALUE MATRIX

MAASSILO, ROTTERDAM

	Age Value	Historical Value	Intentional Commemorative Value	Newness Value	Art Value	Rarity Value	Use Value	Aesthetic Value
Surroundings		 The Rotterdam south area is characterized by its former harbour function. Several morphological elements (old train tracks, roads, harbours and docked boats) that characterize the surroundings of the Maassilo.	 The names of streets, harbours and neighbourhoods refer to the history of the area. "Maashaven" for instance, refers to the previous harbour function. Or "Tarwewijk" as we see on the map the name of the neighbourhood.	 A lot of new buildings (especially on the Kop-van-Zuid by famous architects) bring new activities to Rotterdam-Zuid. These buildings function as a catalist for the development of the area.			 Due to the development of new connections with the center, the area gained a good location within the urban fabric of the Rotterdam. With the harbour-industry disappearing, the area remains with lots of space for further development.	 The new high-rise buildings that have been constructed over the last two decades create an interesting contrast with the original industrial buildings.
Site	 Rust, algea, and decay are visible on the structures of the unrestored elevator towers.	 The building complex, together with the elevator towers and connecting bridges form an almost total ensemble (train tracks are missing) in which the process of grain storage and distribution took place.	 Sofar two Elevator towers have been restored in 2015. They have been brought back to an original state which is clearly an act of commemoration.			 The total ensemble of fixed elevator towers, moving elevators, supporting bridge structure and the connection with the building complex is rarely found in the Netherlands.		 
Spatial Composition		 The different volumes give an impression of the development of the company, the economy and of the building as a whole. However this unclear to the untrained eye.						The building has always functioned as a resilient mass in a vibrant industrial setting. The abandonment of activity evokes the image of an empty stage.
Skin	 Weathered surfaces, decay, damage on mainly plaster and rust on steel is visible on different parts of the facades.	 Since civil works and industrial buildings became part of the architectural discourse in the beginning of the 20th century, the silo buildings are important works in the oeuvre of the different architect. For Haan the office building was a bit less important being 1 of many.	 The original sign of the east-facade on the building by J.P. Stok has recently been restored from to the original as it was built in 1910. And next to the entrance door on the same building there is a sign indicating the company details.		 The architectural styles that are represented in the facade express the architects artistic intentions. J.P. Stok 's facade for instance, expresses the different functions on the inside. The 35 x 55 meter painting called "Flyers of hope for universal Love" by the spiritual artist Lisa Lux on the 3rd-phase building is literally a piece of art.	 There is no trace of any identical 'plofroosters' like the ones in the third building by J.D. Postma which make it very unique.		 To prevent noise pollution from the club to the neighbouring houses the 'plofroosters' where covered by steel boards on the inside. Consequently the aesthetic appearance of the light coming in through these grills has been lost. Another element are the octogangl ribs of the silo's that emphasize the brutalistic appearance.
Structure	 The structure shows clear decay, has been worn out and damaged on several places and the concrete surface has gotten dirty after the hundred years of usage.	 The development of the technological possibilities in these concrete superstructures is remarkable. The 'plofdak' that has been used in the 2nd phase, the base structure for the office by H. Haan but also the increased height of silo's in later phases are examples.		 The big columns have been cut away on the groundfloor and some have been replaced with new thinner columns in order to create more space for the Now and Wow music club.	RELATED		 Due to the intervention with new columns bigger space is currently available that could easily be used in several ways. Besides that the structures is designed to bear the load of 86 million kilos grain. This loadbearing capacity offers great opportunities.	 The structure contributes to the industrial feel due to its rough finish and the big scale that is less related to human and more to machine. The structure is the building hence it makes the athmosphere.
Space Plan		 The space plan is highly related to the original function of the building. Hence the layout plays an important part in understanding the way the building was used.					 **low use value.** Together all silos form 80% of the actual building volume. The use value of these spaces is verry low at the moment. Its a great challange for the future redesign.	 The functional layout of the building as an ensemble of rigid grids results in a repetition of elements. Consequently a 'pressing' symmetry can be experienced in many parts of the building.
Surfaces	 Many surfaces, including signs, are damage or even worn out to the point that they are no longer readable. This clearly shows they are from another time.	 The codes painted on the Silo's, the blue and yellow silo, and signs like 'grgas' on the door give an impression of the strictly functional original usage.			 Graffiti artworks on the ground floor and on the 10th floor in the 010 Factory have been made during the renovations. The graffiti on the ground floor was commissioned by Pepsi MAX and carried out by graffitinetwerk. Its still unclear which artist did the artworks in the 010 Factory.		 **low use value.** In its previous function the funnels strictly fulfilled the purpose of unloading grain out of the silo's. Due to its specific function its very difficult to come up with a new use for these funnels.	**aesthetic value.** As an ending of the Silos, in a way the funnels form the ceiling that is so characteristic for almost the entire ground floor space. The shape of these surfaces hint at an unknown presence behind those surfaces. Despite that, the funnels have a very unique and striking appearance.
Services/Stuff	 Mainly rust and decay but also damage is visible on machinery and utilities around the building.	 The machinery and utilities give an impression of the previous function of the building. The elevator system that was used to blow grain through pipes to the top of the building where one of the first of its kind and very unique at the time.	 During the renovations some of the machinery has purposely been put together to be exhibited. The chalk board in the control room on the 2nd phase building shows a grid of different silo's and the type of grain stored inside. The board is sprayed with a substance that preserves the chalk and makes it un-erasable.				 The buildings was never designed to host vast amounts of people. For the new club, ventilation systems have been introduced during the renovation. These run through some of the silos and provide the spaces with enough fresh air.	

Essential values
Taking away these elements would change the total essence of the complex

Important values
These elements make the readability of the total ensemble richer

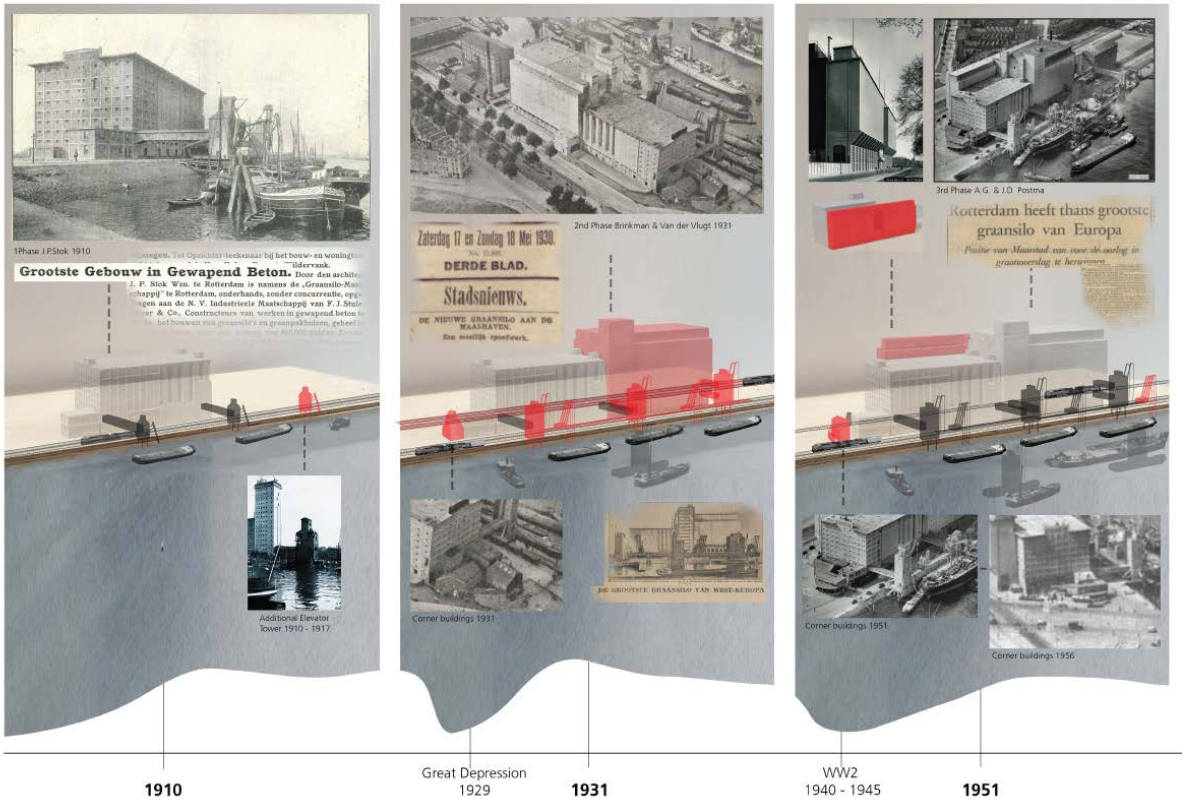
Complementary values
When these aspects are altered the general idea of the building can still be read.

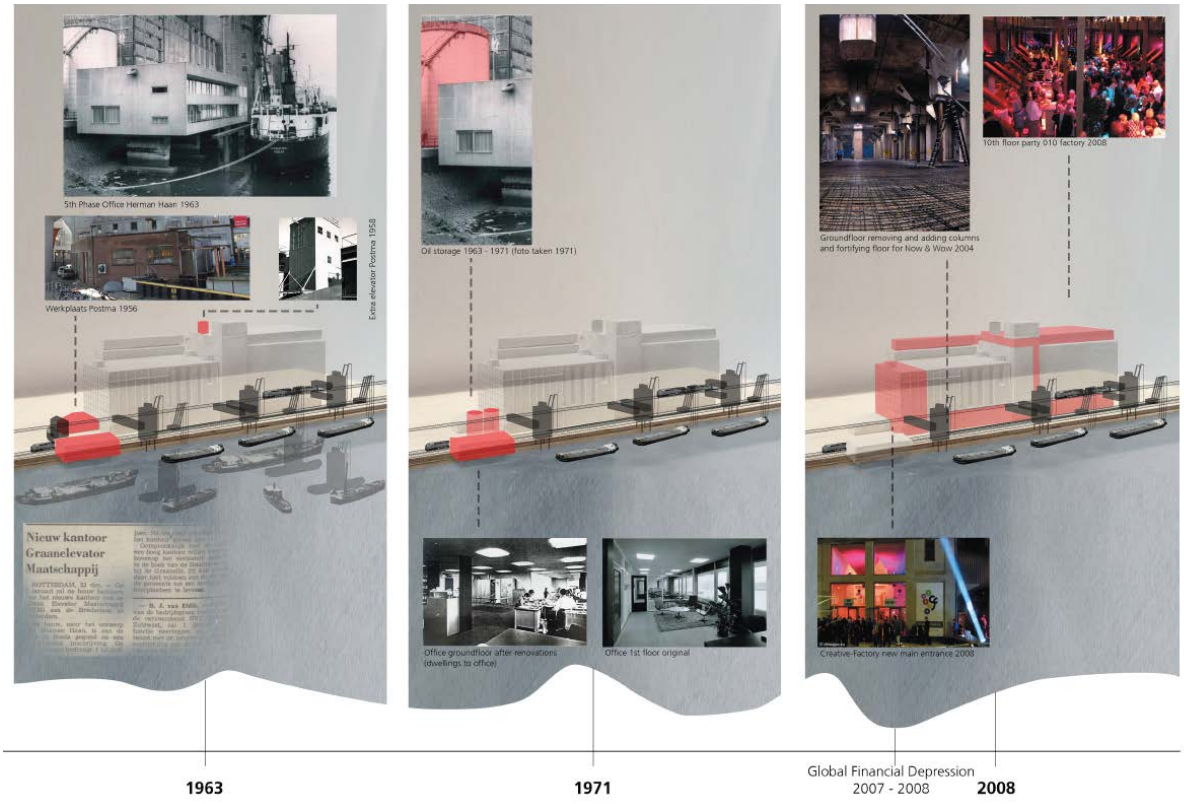
Value matrix. Maassilo booklet

Maassilo Ensemble

The reason why the Maassilo ensemble is so valuable and should remain visible even after the redesign is that it showcases the economic growth the company and the city of Rotterdam have had in the past century. Also the connection with the water is made very clear with the grain elevators and vacuums still intact on the north side of the building. So even though the activity around the building and in the Maashaven have almost completely disappeared one can still see why the building and cranes are heritage.

Chronomap. Maassilo booklet

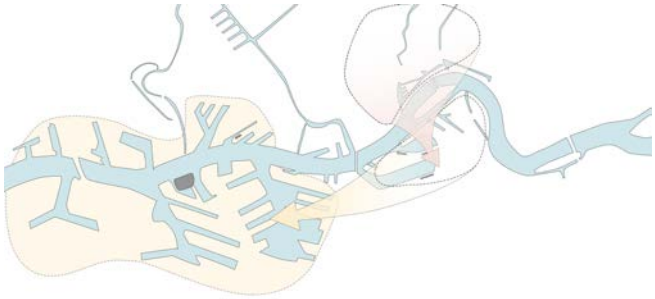




After finishing the analysis of the Maassilo, I became much more aware of the cultural values of the building and the general understanding of this gigantic mass. And from this analysis four bold statements were created by the group that summed up the main points of attention that need to be taken into consideration while redesigning the Maassilo. I will be explaining how I implemented these statements into my design and show how I used them to enhance the cultural values as well as shape my design.

North / south

The geographical position of the Maassilo is something which is very important to the history of the Company that build the Maassilo and to Rotterdam. Due to the creation of the former harbor districts. Now a days the Maassilo is one of the few remaining industrial buildings surrounding the Maashaven thus making it a reminder of the activity that once took place there. The conflict that the group came to was that it formed a barrier that makes it difficult to connect the southern districts to the harbor area north of the building. While there might be some truth to it I feel that the opportunity heavily out weights the conflict. The Maassilo could be treated as a gate, mediating between two different stages of development and help improve the districts with a low social standing.



Movement of industry. Rotterdam harbor studio booklet

i think that the obligation of the group perspective is too focused on the preservation of the separate areas , while I'm trying to use the Maassilo to attract people from everywhere to improve the social standing of the surrounding neighborhoods.

The function that I chose for the Maassilo due to this reason is a museum. Research done by the municipality of Rotterdam called "zuidvruchten kweken" and the "effectmeting zuidvruchten kweken" clearly show what kind of positive effects Art and Culture can have on social development of urban districts. So by using its geographic position and history as landmark at the Maashaven and combining this with Art could create an new public icon for the area to flourish the former workers districts.

Cultural icon. Own image

Public / Private

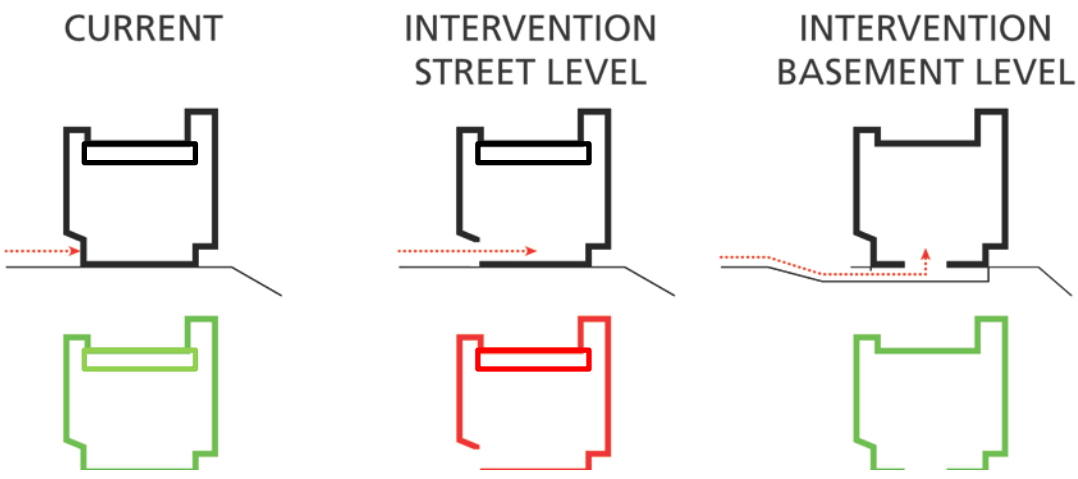
original worker entrance photo: transformers

The formal characteristics of the exterior appearance of the Maassilo are impressing, but uninviting to the public. Also the original function of the building is non-public. Opening the building up visually would undermine the specific historical and aesthetic character of the Maassilo, due to its prior function which was an industrial workspace that was off limits to the public.

The opportunity here is that the closed-off character of the building could be turned to an advantage instead of a hindering factor. Because of this character I was forced to look at different solutions for daylight for example. Which I will discuss in the next topic.

The obligation towards this character of the Maassilo which the whole group agreed on was that the character of the Maassilo, as a closed-off mass, is grounded both historically and aesthetically. Therefore, this character should be cherished and, if possible, turned to an advantage. If the building should assume a public role in the city, the solution could be found in finding the right program or function.

This character that should be cherished is something which I feel very strongly about. That is why I didn't want to make any interventions in the façade to open it up even though I want to create a public function(museum) in the building, this also applies to the entrance. Shown in the image above is the original main entrance of the Maassilo for the workers, there never was any need to create something bigger than an normal sized door due to its function of storage and transport facility. That is why I created an entrance below the ground through the basement. This way the shell/image of the building was kept intact, but with this entrance it was also easy to use the basement space which otherwise would have been difficult to appoint a function to in almost any kind of new public program.



New entrance. Own image

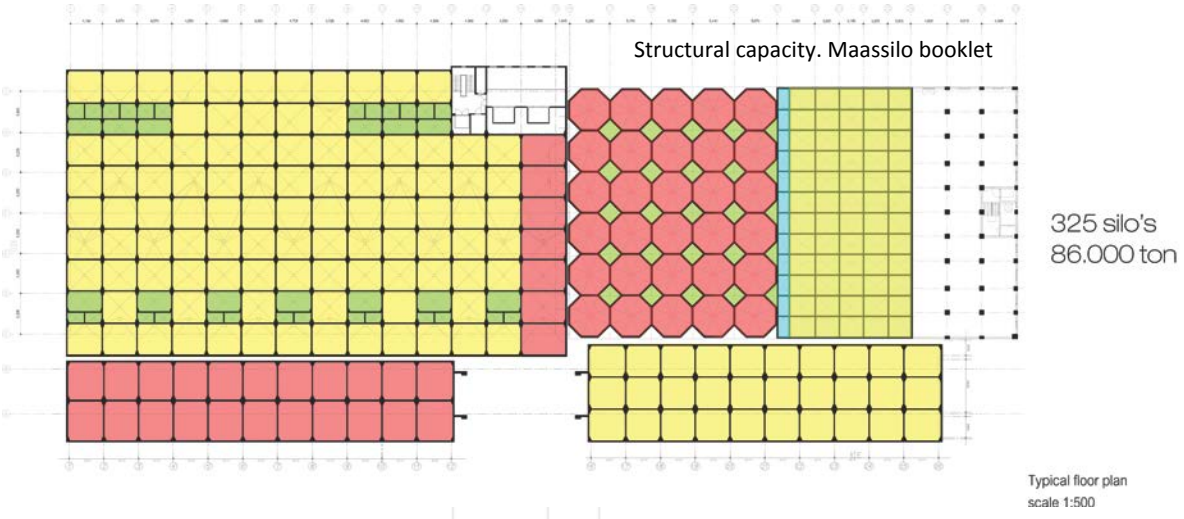
Static / dynamic

The Maassilo was created for the sole purpose of storing grain for later distribution. This meant that it had to be able to hold massive amounts of grain in its silos, which meant that the structure of the building had to be incredibly strong in terms of holding loads. To be more precise the total amount of weight the Maassilo is able to hold is roughly 86 million kilograms this equals to approximately 16.000 elephants. Because of this extremely strong structure and the abandonment of storage which left the silos empty, there is now an structure which isn't holding even a fraction of the load it was designed for making it an opportunity to do a lot in the building in terms of interventions and adding new program.

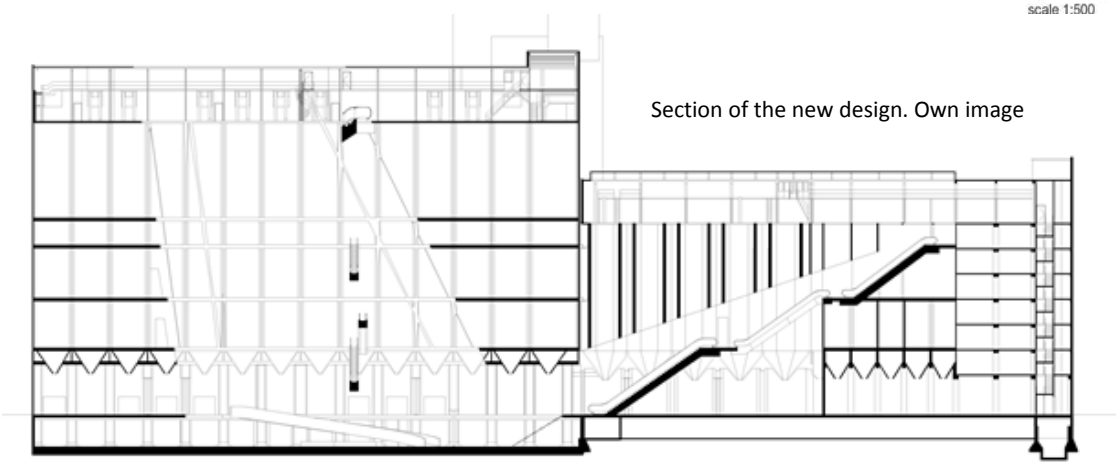
The architects of the Maassilo were well aware of the obstinate character of the concrete structure. They understood it was essential of each building phase to implement flexibility and maximize efficiency in the space plan. So the approach they took was by using a big grid system of columns that becomes an open floorplan which allows for changes being made on the ground floor if necessary, also they implemented rails in the columns so that equipment could be attached to the columns so that workers could perform their work in all places of the building.

Embedded rail. Maassilo booklet

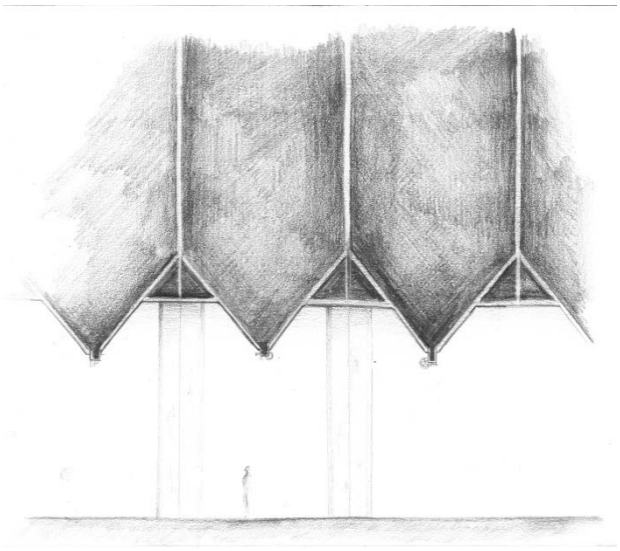
The Maassilo has existed for more than a century, and it still stands strong. This has to do with the fact that different strategies, like a structured open space plan and integrated flexible space with rigid material. Still, the Maassilo is a very specific building for a specific function. This specificity is found in the vertical building sections (attic, silos and ground floor). So how to use these qualities and showcase them in the new design is essential, I will try to explain how I approached this in the next chapter.



Structural capacity. Maassilo booklet



Section of the new design. Own image



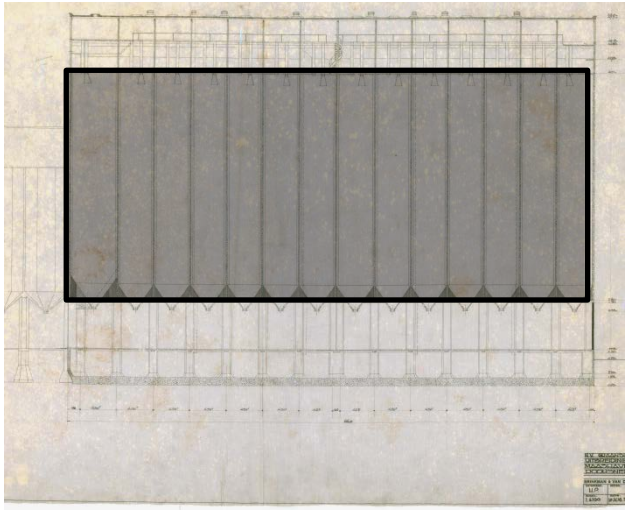
Concealed silos. Maassilo booklet

Readability / concealment

When you see the Maassilo from the outside you see a monolithic concrete structure which looks like something that is out of place in terms of context, material and foremost its size and volume. The building is so massive that it's hard to look passed. But once you enter the building you get a totally different feeling, this size which you experience from the outside is nearly impossible to experience from within other than the scale of the structure and spaces, which were built according to industrial measurements.

Almost 70% of the buildings volume is occupied by silos which are now empty. This makes it a great opportunity for new program within the building. But these silos also hold a piece of the history of the Maassilo, that is why it's important to not remove the silos in its totality rather the remaining grid of the structures of the silos should be used to create an interplay between hidden and the revealed structure. This can be enhanced, for example by partially revealing the formerly unseen. The unknown could be made even more exciting by revealing parts of it, and thereby strengthening the sense of curiosity and wonder. This could be a powerful tool in establishing an architectural route through the building.

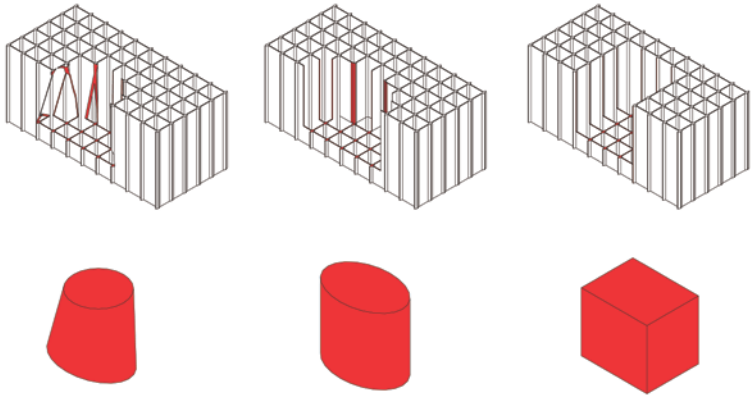
The interplay between readability and concealment plays a very important role in both the experience of the building as the possibility to read its history. This tension should be taken in high regard, and if possible made even stronger. For example by carving out negative spaces out of the silo structure of the Brinkman phase(1).



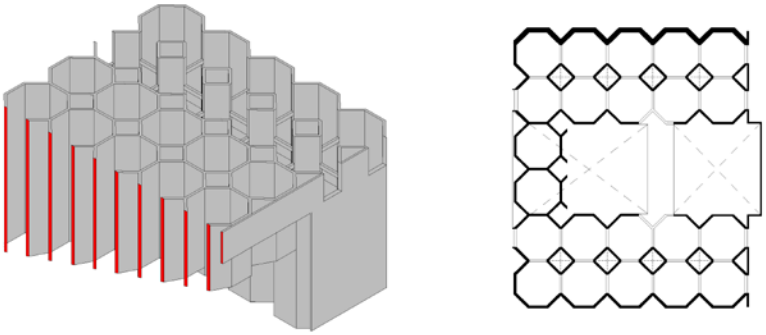
Closed off silos.

Own image/ old drawings Brinkman

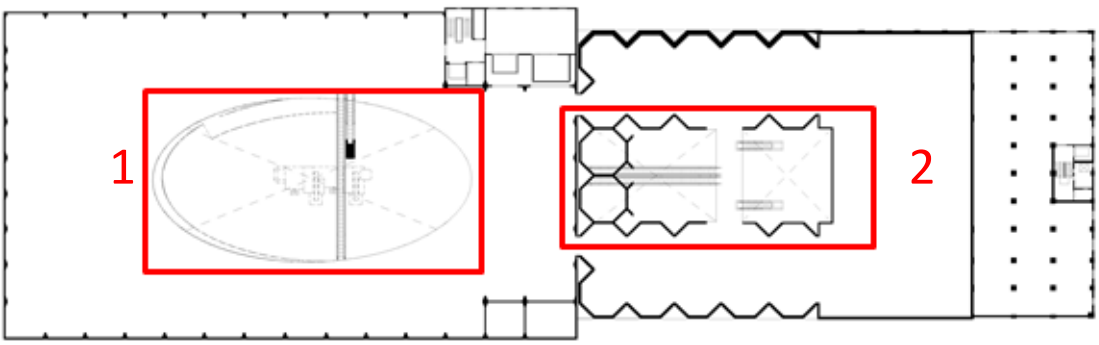
Brinkman silo intervention. Own image



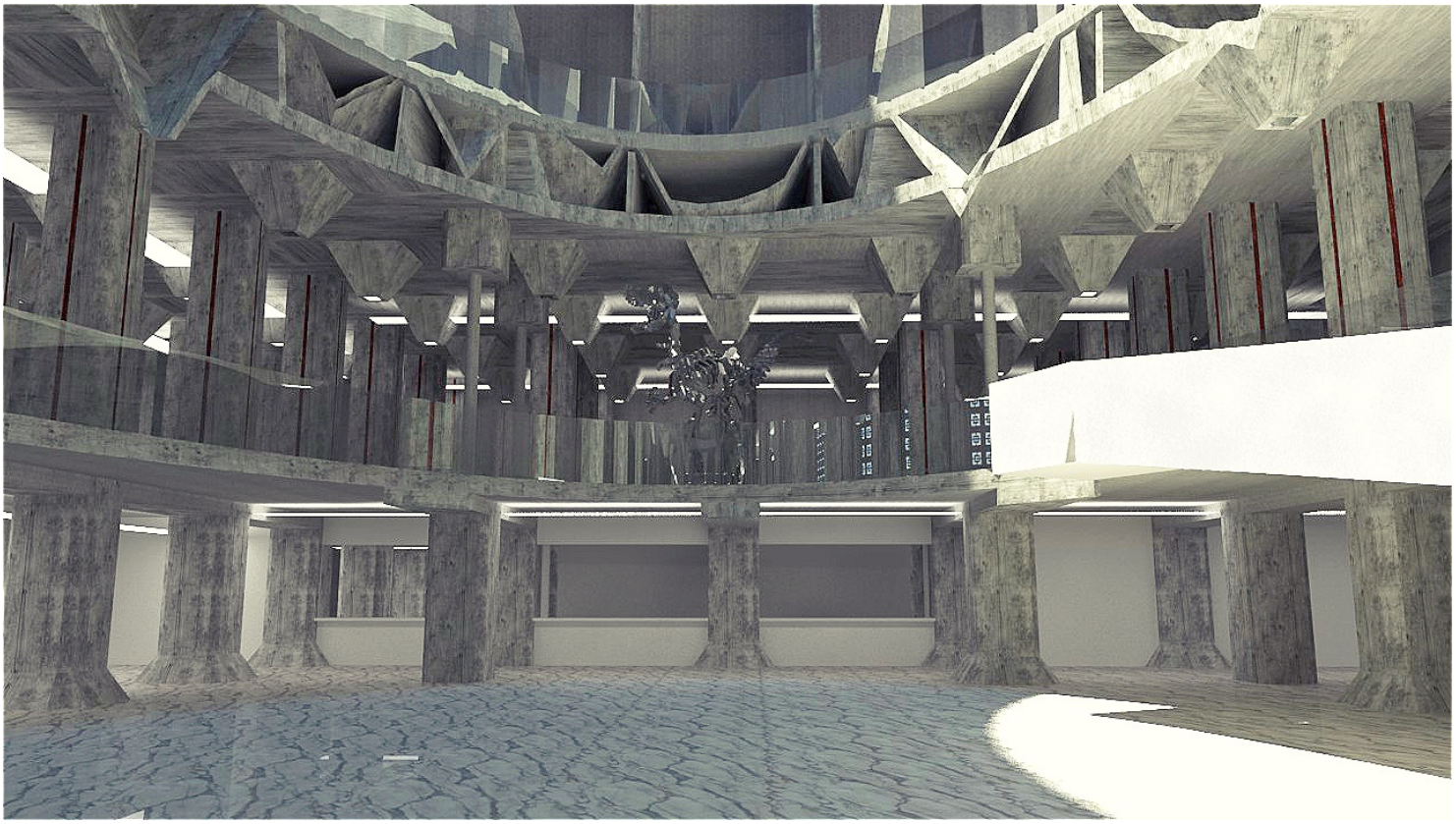
Stok silo intervention. Own image



Because of my decision to hold the private character of the Maassilo in high regard I had to think of a way to create daylight within the building without breaking open the facades, resulting in skylights with voids for the daylight entry. So how could these design choices enhance one another. My approach for these interventions in the silo structure was to try and show as much of the silo structure in the intervention of the void. When removing the silos there are multiple ways in doing so, for example you could remove silo walls according to the original structure and end up with a square space, this doesn't really enhance the value of the silo grid because the experience isn't any different than from a normal room with a high ceiling. The same goes for a circular void which goes straight up like a tube. There are some different measurements in the silo walls surrounding the void but other than that the experience remains the same. For that reason I chose a cone like shape to use as a negative space to remove for the void. The structure of the silos now becomes something dynamic due to the fact that there is a diagonal cut combined with a circular cut. So collision happens between the circular cut and the straight silos but also between the straight vertical walls and the diagonal cut creating a cut along the void which shows the entirety of the silo grid and enhances it to a quality which can also be linked to a clear view and understanding of the original structure. As for the voids that I'm creating in the Stok part(2), I will only remove the negative space of the silos themselves because the orthogonal silos are already interesting enough without a collision of shapes to show its original form. Shown on the next 2 pages the voids 1 and 2 illustrated.

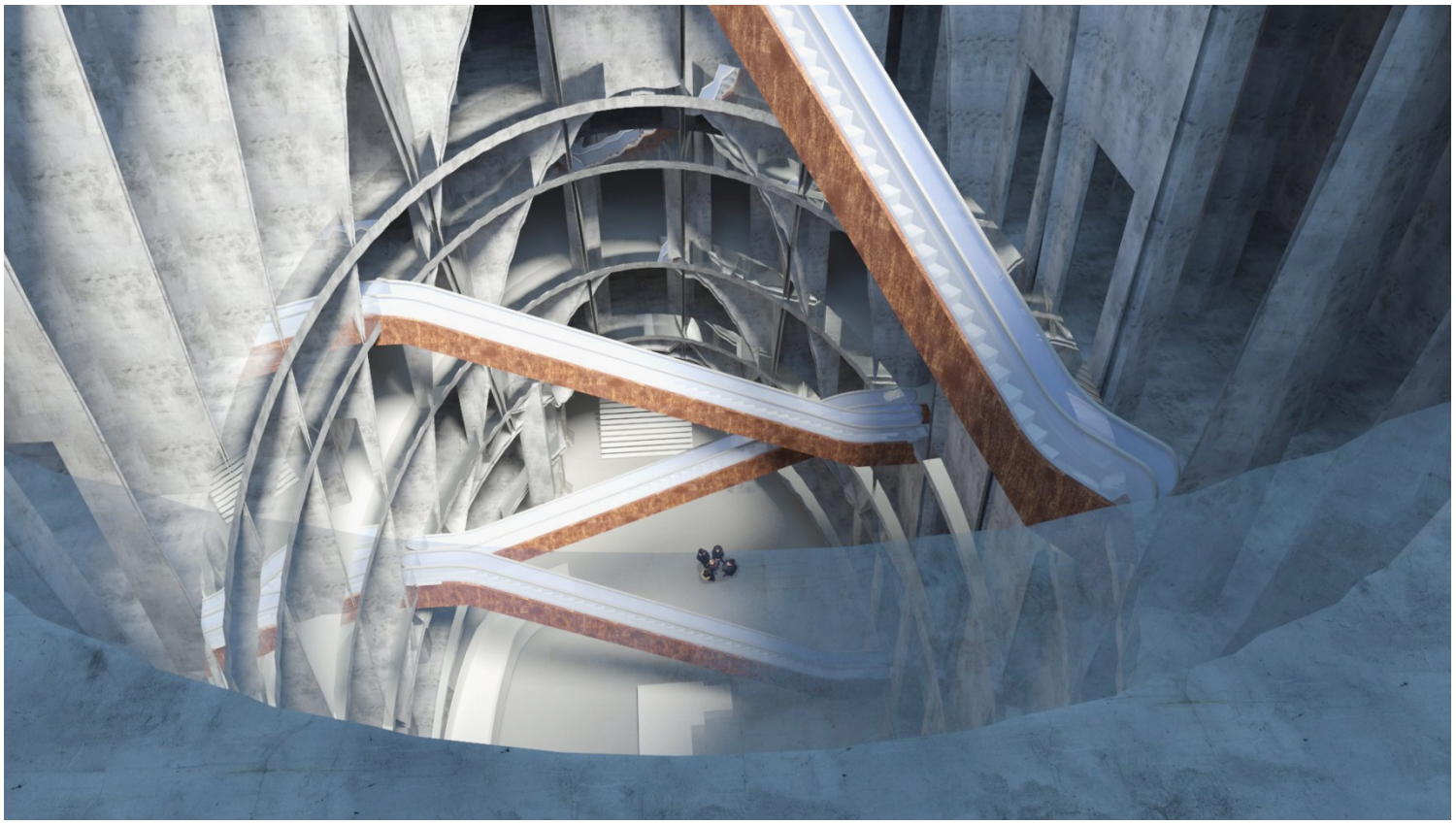


Simplified floorplan to indicate voids. Own image

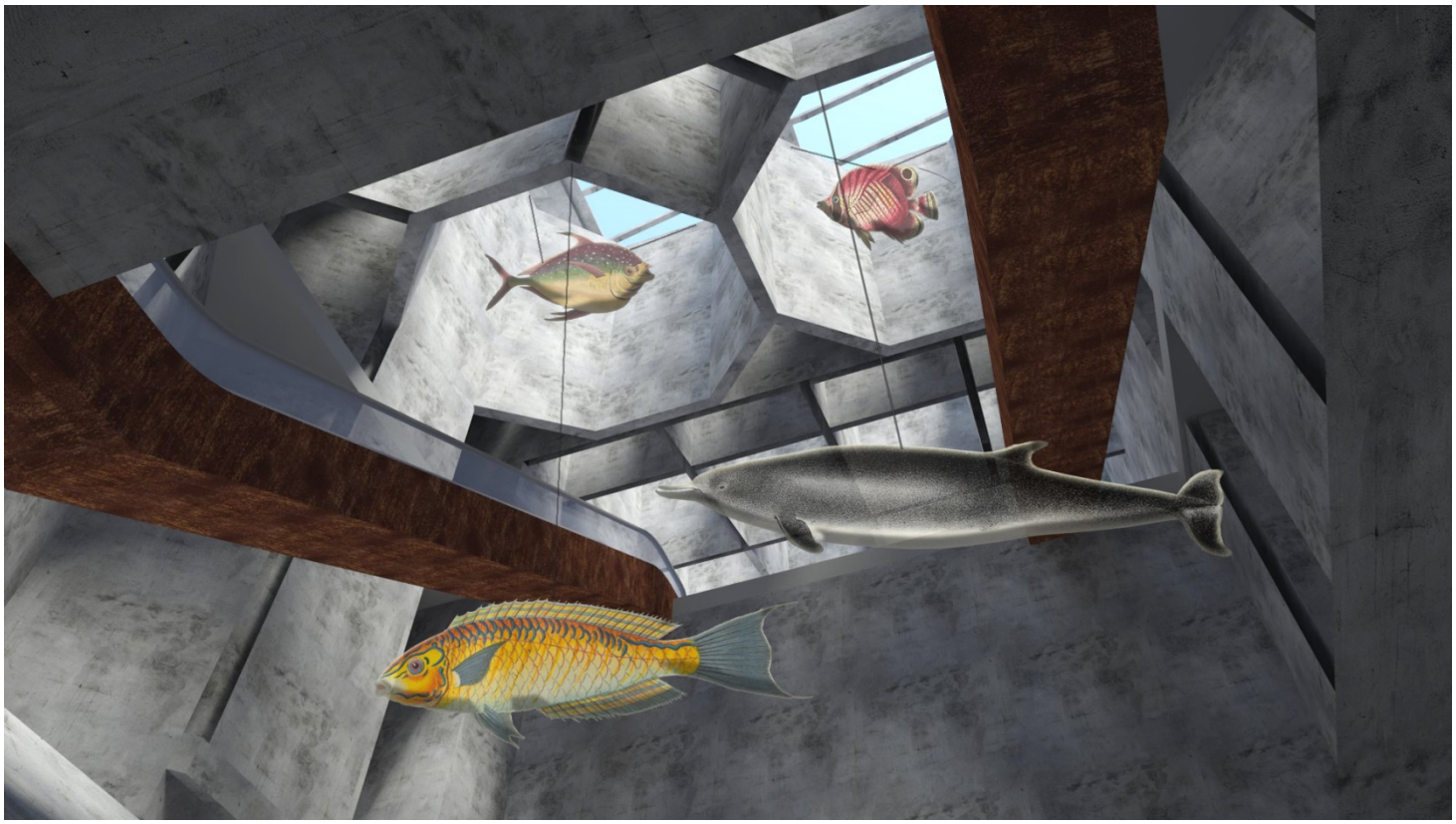


Basement impression of void Brinkman. Own image

1



Top floor impression of void Brinkman. Own image

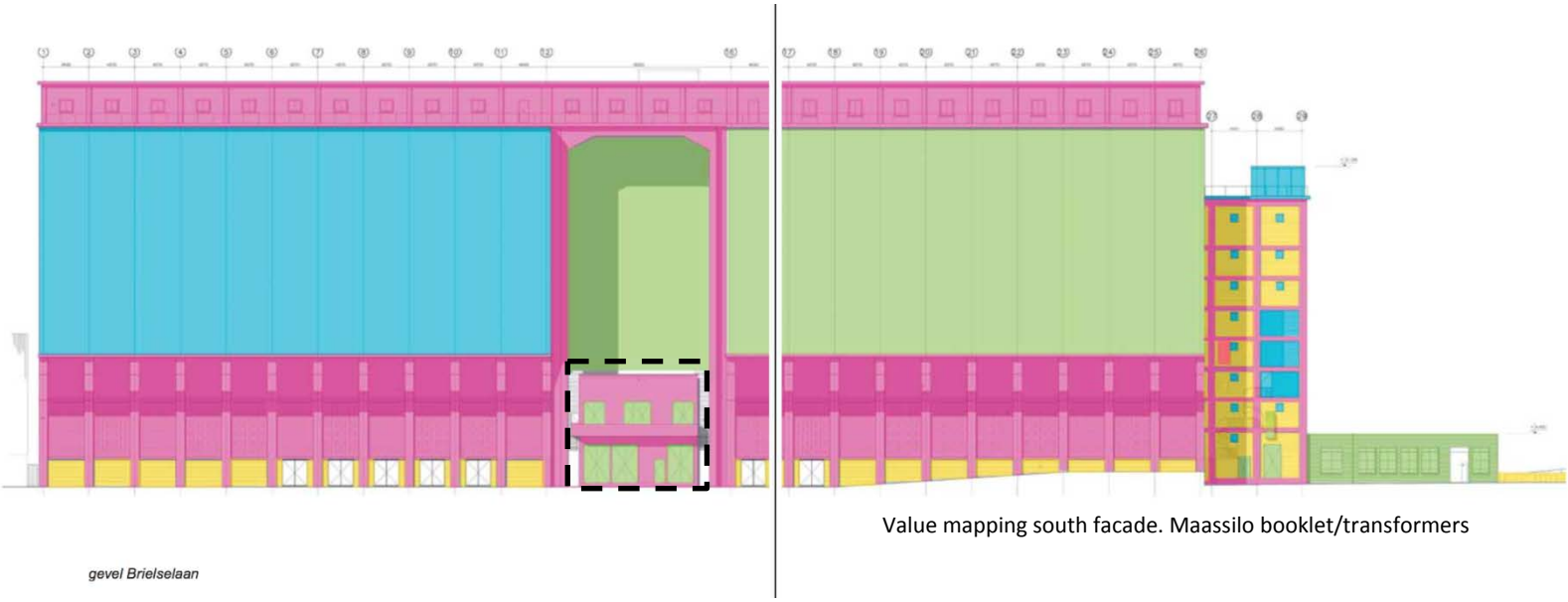


2 impression of void Stok. Own image

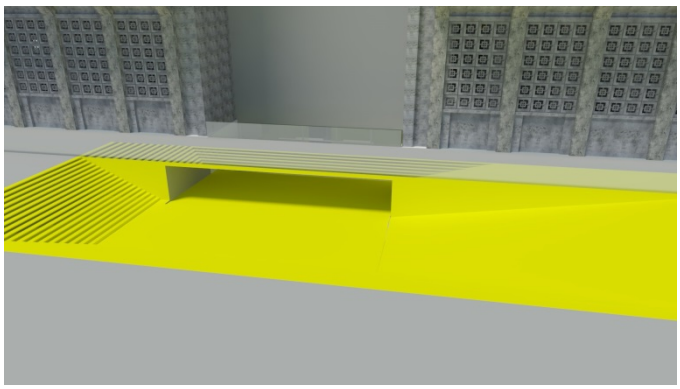
impression of void Stok. Own image

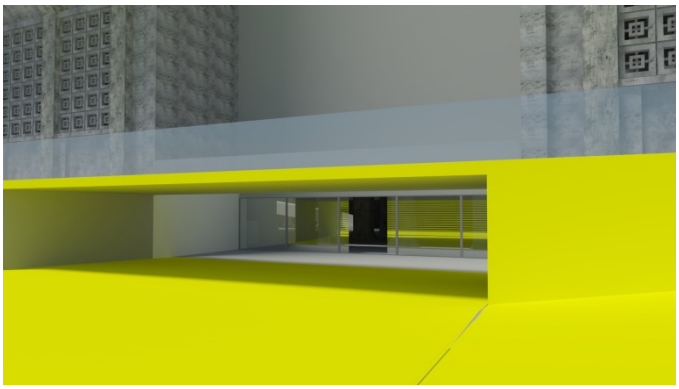
Façade Interventions

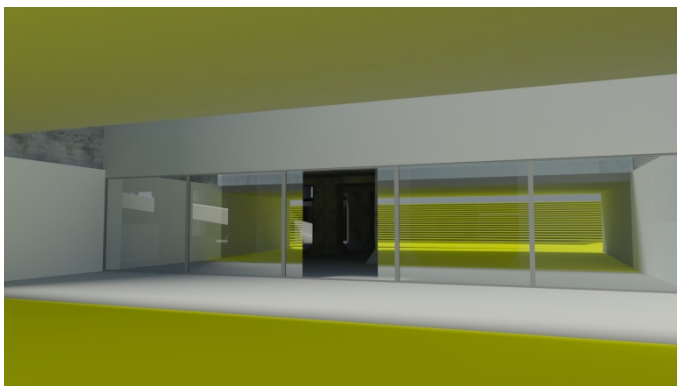
As I previously stated: *"the character of the Maassilo, as a closed-off mass, is grounded both historically and aesthetically. Therefore, this character should be cherished and, if possible, turned to an advantage. "* . Thus I would like to open up as little of the building's façade as possible. Due to this desire to maintain the facades I have chosen to remove the transformer house on the south facade as to free up the ground underneath it from the concrete foundation since the building part itself has no real use value for the future, where I will put my entrance to connect the public domain with the basement.

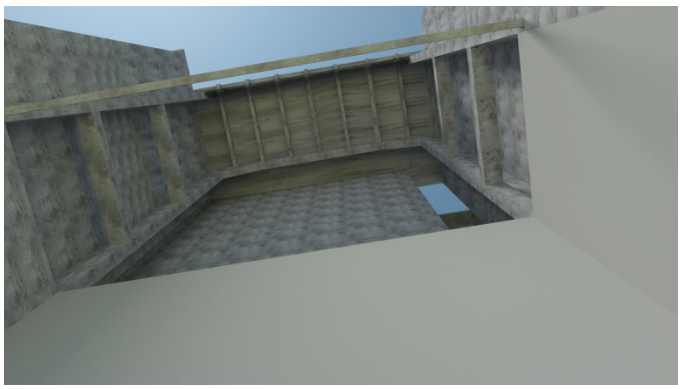


Value mapping south facade. Maassilo booklet/transformers





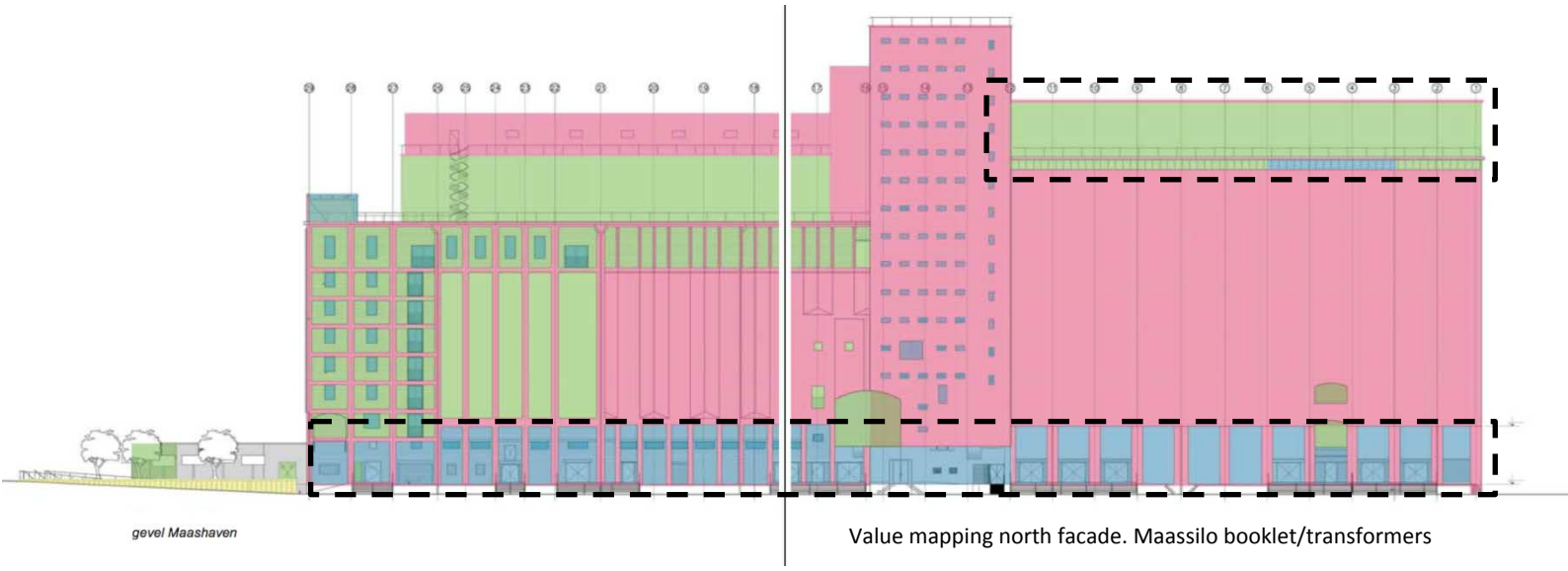




Sequence of entering the building through new entrance. Own images

New entrance situation. Own image

Also looking at the north façade of the Brinkman building phase, I want to open up the toppart of the brinkman building which is only visible from far away and wont interfere with the closed off appearance of the building.

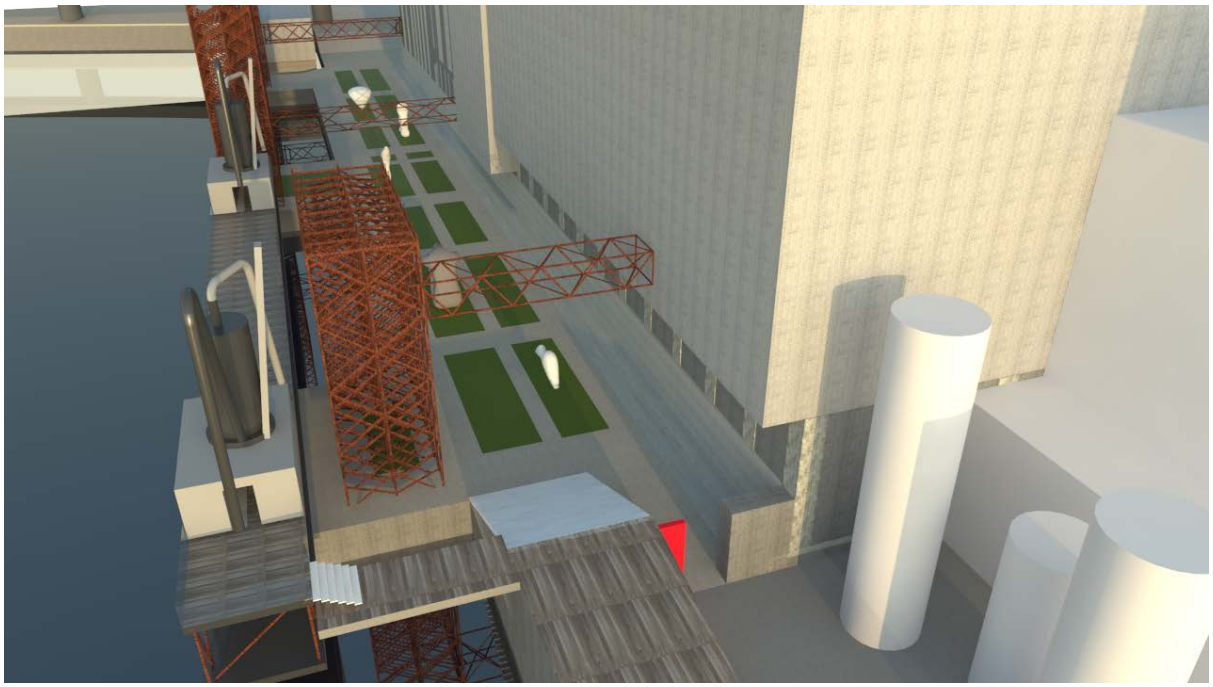


Value mapping north facade. Maassilo booklet/transformers

I'm opening up the top part of the Brinkman roof/façade to create an viewing point over the Maashaven and kop van Zuid districts.

North façade intervention roof and façade. Own image/photo

As for the ground floor of the north façade, it will be closed because the activity has disappeared on the north side of the building and with the intervention of creating an underground entry on the south side of the building I have to bring back dike that was lost in the proces, the best way in my opinion to bring back this dike was to integrate it into the façade of the building and extending the tidal park to the front of the maassilo to prevent future floods.

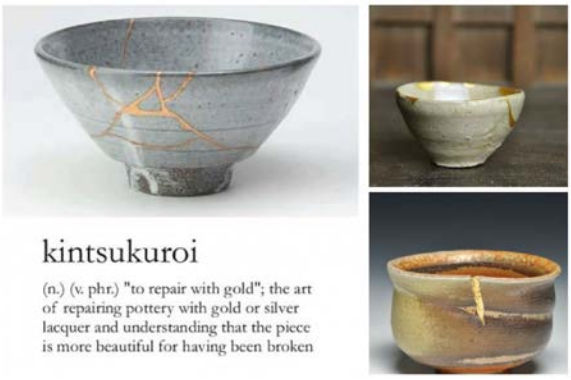


New north façade situation. Own image

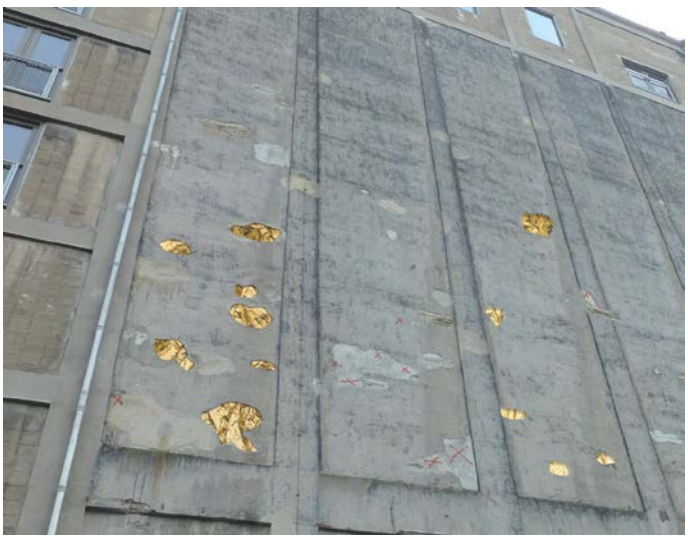
Currently the concrete facades of the Maassilo are still deteriorating and my cause structural damage in the future if this persists. So how to deal with the repairs while also respecting the original. For me it was about highlighting the damaged parts with the repair material als to create a strong contrast between whats told and new. Because in my opinion old and new repair concrete would only decrease the quality of the façade which I did not want to insulate on the outside due to its appearance.

Current state of the brinkman north façade. Image: A. Stuik

while looking for ways to repair my façade I came across a repair technique/art that was created by the Japanese called ‘kintsukuroi’ which means to repair with gold, were they mix gold with glue to create a golden resin that remains gold after the glue dries. It is meant to emphasize the damage that was previously there and to use it’s presence and shape to create beauty and not to simply hide the damage or mistakes.



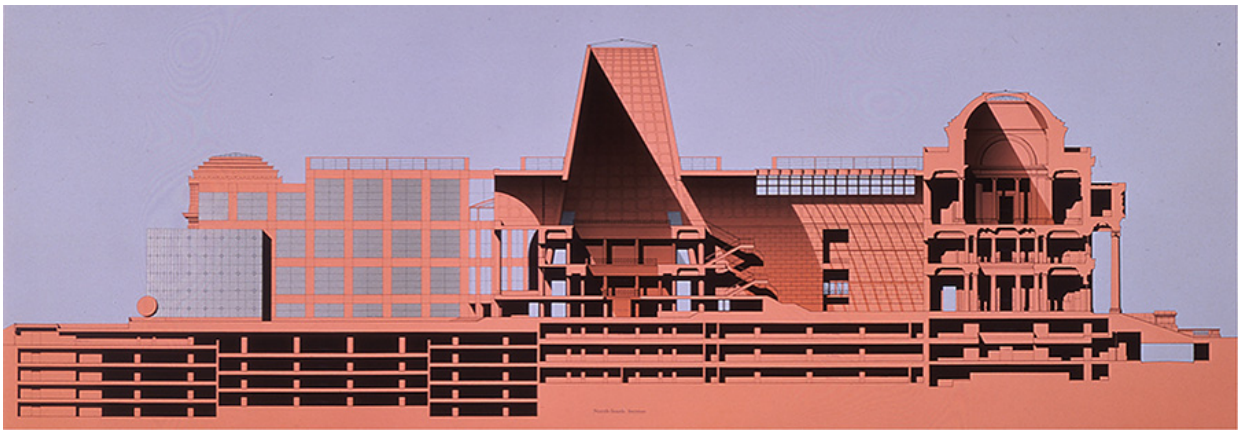
Kintsukuroi. wikipedia

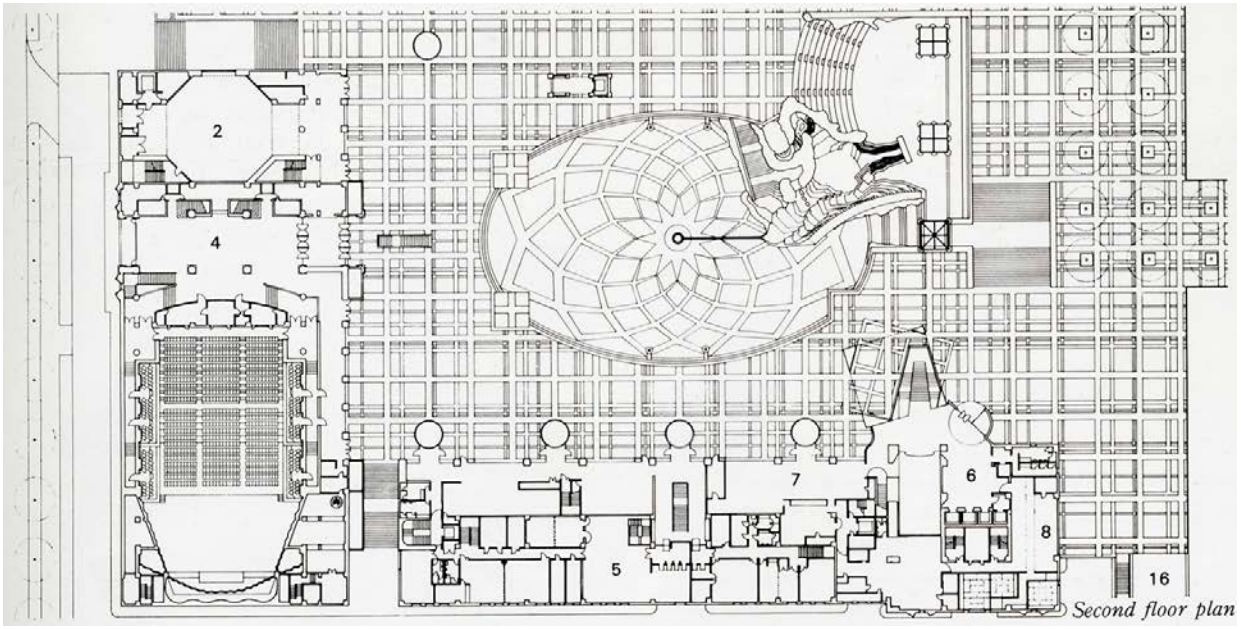


Kintsukuroi repair interventions on different facades of the Maassilo. Own images

References

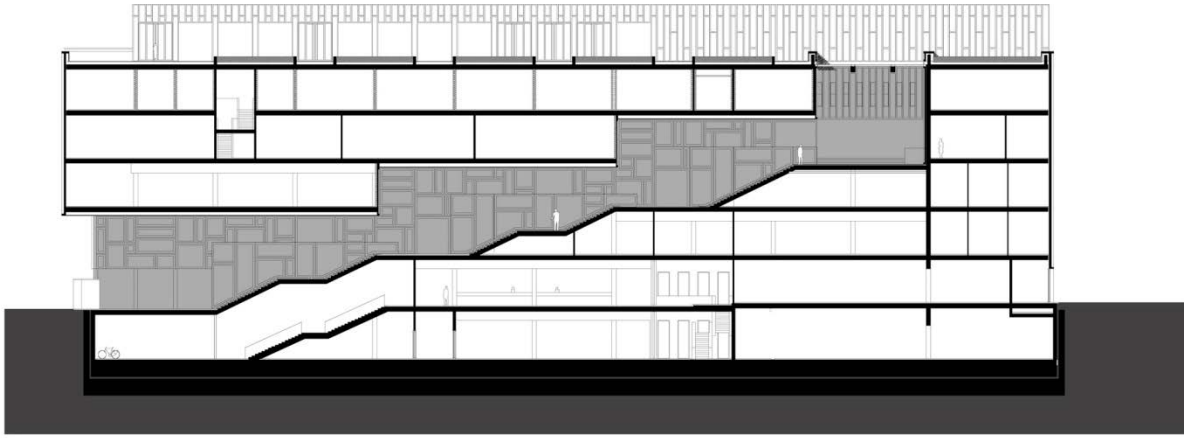
References that I used for my interventions in the building and approach to redesiging the maassilo to a museum.



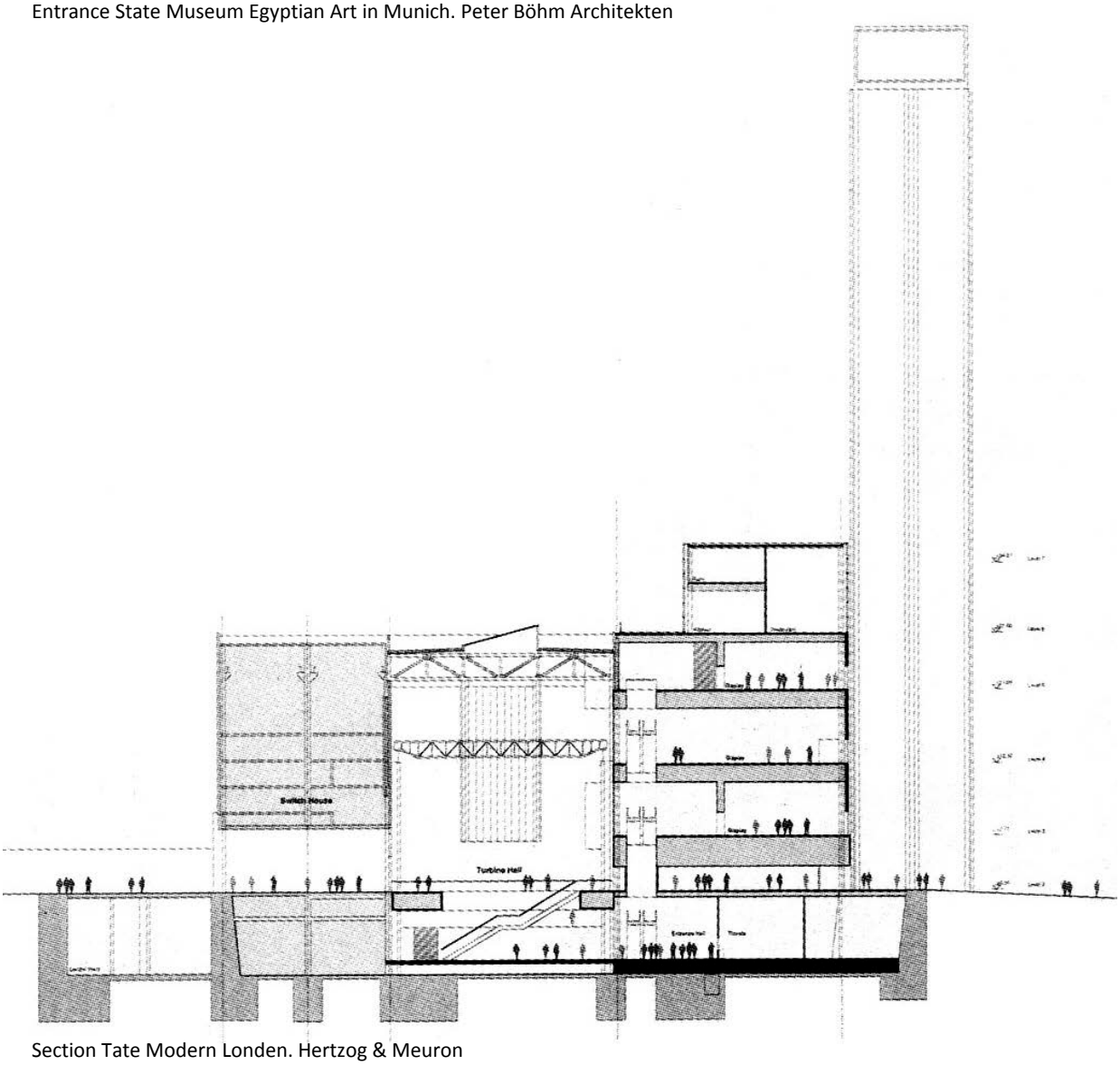


MOCA museum of contemporary art by Arata Isozaki in Los Angeles

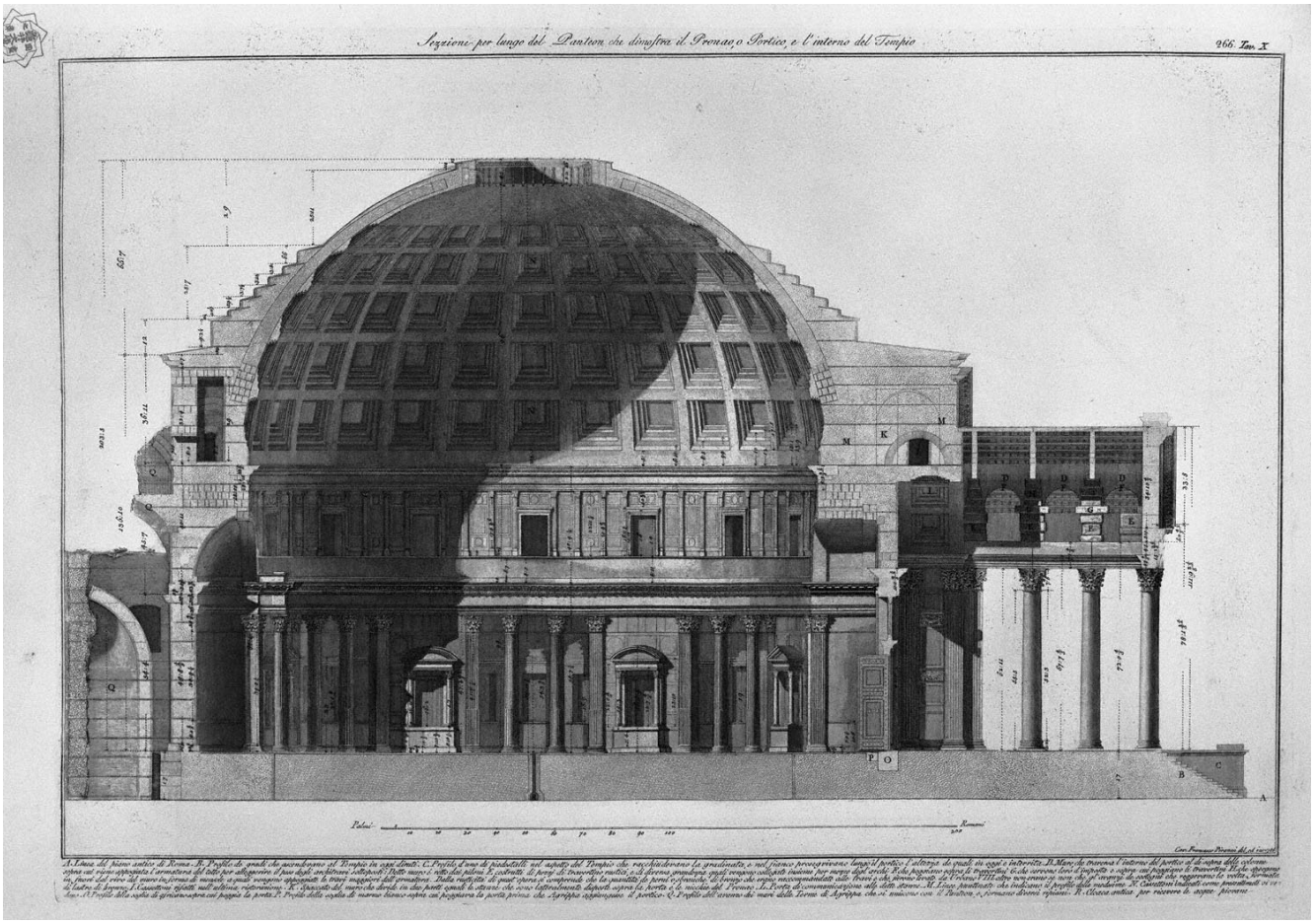
Kennis-cluster Arnhem. Neutelings Riedijk



Entrance State Museum Egyptian Art in Munich. Peter Böhm Architekten



Section Tate Modern Londen. Hertzog & Meuron



Pantheon. Apollodorus van Damascus