

**Helsinki's New Museum  
for Architecture and  
Design:**

*Developing Waterfront  
Museum of the Future*

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Master's Thesis  
April 2022

## Abstract.

Margarita Vodneva:  
Helsinki ´s New Museum for Architecture  
and Design: Designing waterfront museum  
of the Future.

Master ´s Thesis  
Tampere University  
Architectural Design  
April 2022

This thesis includes a design proposal for the New Museum of Architecture and Design. The location of the site is in the South Harbor of Helsinki, Finland. The idea was to challenge the typology of a waterfront landmark and create a structure that addresses the human scale.

The main challenge of the design was to find a balance between the building ´s relationship to its context, what is required for the optimal functionality of the new museum and how can social, economic and physical accessibility be integrated within.

By analyzing the future users of the museum, the building ´s program was established with a focus on the most vulnerable groups of society. The public nature of the museum will provide a focal point for the shore by activating and reviving the underused Makasiiniranta area.

Each design step takes careful consideration of the approach to the site, internal circulation, views, and connections with external functions.

Keywords: museum, museum design, museum of architecture and design, waterfront museum, architectural design

*The originality of this thesis has been checked using the Turnitin OriginalityCheck service.*

Master ´s Thesis

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Designing waterfront museum of the Future.

Architectural Design  
April 2022

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# introduction

There is an ongoing preparation organized by the City of Helsinki to establish a New Museum of Architecture and Design that will combine the two existing museums. The location of the museum is at Helsinki's waterfront – Makasiiniranta district in South Harbour. The new building should accommodate a new concept for the museum operations and allow for an additional program that will open up the museum to everyone and generate an environment for learning and creating. There will be a separate architectural competition held in the later stages of the development, once the plans are approved which will most likely take place at the end of 2023. (New Museum of Architecture and Design, 2021)

The South Harbour is rather underused at the moment and there have been many architectural and urban planning competitions during the past years. However, the

chosen proposal was never put forward due to a combination of multiple factors such as lack of funding or public rejection of the projects. The most recent proposal was Guggenheim Museum Competition after a 5-year process was voted down by the city council. (Hirvi-Ijäs, M., 2016)



Picture 1. Source: Helsinki City Museum:  
Helsinki- Suomen Ilmakuva Oy, 2015





**context**

## South Harbour

In 1813 the port of Helsinki has been allocated to the South Harbor and since then the development of the city waterfront took a steady pace. An important event took place in 1894, when the first railway line has been introduced to the area, connecting the center with the port, marking the mechanization of the harbor. (Historia, n.d.)

Nowadays the port operations are spread across three main sections: West harbour, Vuosari, and South Harbour. (Historia, n.d.)

Besides harbour functions, there are several recreational and commercial zones in the area including a new Alas sea pool at the Katajanoka extension. The public pool was designed by Huttunen-Lipasti Architects and completed in 2017 built as

an attempt to bring more public functions into the area. (Huttunen\_Lipasti Architects, n.d.)

Due to the cultural heritage value of the South Harbour there are several protected zones that will require special permissions for any future alteration and would have to be considered for the development of the project. The previously mentioned Olympic terminal building was marked in 2009 as a “nationally significant built cultural environment” according to Finnish Heritage Agency. (Loci maisema-arkkitehdit Oy, JKMM Architects, 2021)

Another important zone is the one surrounding Suomenlinna’s site which is protected by Unesco World Heritage. (Loci maisema-arkkitehdit Oy, JKMM Architects, 2021)



Picture 3. Source: Helsinki City Museum:  
Eteläsatama - Unknown photographer, 1895



## Market Square

The original location and shape of Market Square were based on the city plan drawn by Ehrenström in 1810. Surrounding buildings, erected shortly after were meant for the bourgeoisie of Finland. The original functions were later changed and the buildings were redesigned for their new purposes. (Museovirasto, 2009)

On the west side of the harbor, the oldest Market Hall in the city is located. Designed by the architect CL Engel it continues to operate to this day (Museovirasto, 2009). The construction of the Market Hall marks an important event as it is the first time in Helsinki that trading has been moved indoors. (Vanhakauppahalli. n.d)

Currently, the building is operating as intended, hosting multiple local shops and smaller restaurants. During summer the

functions extend towards a terrace overlooking the seashore.



Picture 4. Source: Helsinki City Museum:  
Market Square - Unknown photographer, 1890

### Current conditions

Due to its historical location, the site is situated in an important part of the city. On one side we have a functional sea harbour while on the other hand there are many important buildings located in close proximity. The sensitivity of the spot needs to be well addressed in the resulting proposal and should respond to and integrate within its context.

The site is well connected both by pedestrian routes as well as public transport, however, at the moment it serves as a parking lot, giving little significance to its urban value. The boat terminal that is planned to be demolished will be replaced by a new commercial and business structure, drastically changing the nature of the site (Hel. 2021).

There is an opportunity to provide another activity node that together with Market Hall, Market Square, and Allas Seapool will form a busy and active public zone by the seashore.



**current premises**

### Museum of Finnish Architecture

Completed in 1899 the Finnish Architecture Museum building was intended to be used for scientific societies. Designed by Magnus Scherfbeck it's a great example of neo-renaissance architecture. The original plan was to integrate extensions on either side of the central part, which were never completed, resulting in a grand staircase but rather small interior spaces. Even though the extensions were never built, the building continues to operate as a museum with multiple functions included in its plan. The main entrance is not wheelchair accessible, those with disabilities would require to go to the back entrance in the courtyard and ring the bell to open the door. (Kummala, P. and Standertskjöld, E., n.d.)

The first floor and basement are occupied by a scientific library, as originally

intended. The third and fourth floors include an archive. The main exhibition spaces are located on the second floor. In addition to its main functions, the museum also organizes lectures about architecture in collaboration with Finnish Universities. (Kummala, P. and Standertskjöld, E., n.d.)

The "Architecture Speaks" series was specifically aimed at Aalto students however public could also sign up for the lectures.



Picture 5. Source: Helsinki City Museum:  
Kasarmikatu 24 - Rista Eeva SER, 1982



### Museum of Finnish Architecture

Within the premises, the museum includes comprehensive collections of scale models and architectural drawings. The scale of these models varies depending on the purpose of the project. (New Museum for Architecture and Design, 2022)

The drawings archive demonstrates a well-curated selection of drawings illustrating the 20th-century architecture in Finland. Some of the collections are open to the public and can be viewed online. What is not stored in the archives can be found in the library that is often used by researchers as well as students. The material does not limit itself to books and magazines but also contains architects' lecture notes, travel diaries, and correspondence. (New Museum for Architecture and Design, 2022)

Due to the limited size of the premises a competition for a Centre for Temporary exhibitions was held In 1987. The winning design was proposed by Tuomo Siitonen but due to the recession the project was never realized.

(New Museum for Architecture and Design, 2022 )

Today 1/6 Part of the building is occupied by a staircase which is an unfunctional proportion. The exhibition spaces are therefore quite small and there is a limit to how many changing exhibitions a museum can have. Although it has historically valuable architecture the existing Museum of Architecture does not qualify as a modern museum as it simply does not have the space to accommodate all the functions.



Picture 6. Source: Helsinki City Museum:  
Kasarmikatu 24 - Rista Eeva SER, 1982

## Design Museum

Similar to the Architecture museums the original purpose of the Design Museum was not related to the museum's functions. Gustav Nyström was commissioned to design a private school for Swedish-speaking pupils. Completed in 1895 the building premises were in use for their original purpose until 1977 and switched to become the Design Museum in 1978. (Design Museum, n.d.)

The educational character of the museum has dictated the functions available to the public. Many learning possibilities for different age groups have been organized with the current exhibitions. The content of the exhibitions has varied through the years depending on the relevant attributes of the industrial design of that time. (New Museum for Architecture and Design, 2022)

Museum's functions have now expanded as well as the collections on show. It can be visible from the museum visit that it is moving towards a more digitally integrated type of exhibition. Due to the lack of sufficient space, the main rooms for permanent exhibitions seem to be crowded and chaotic. This could be due to the increasing need for staff spaces as well as larger exhibition rooms.



Picture 7. Source: Helsinki City Museum:  
Korkeavuorenkatu 23 - Salokorpi A., 1894

# case study

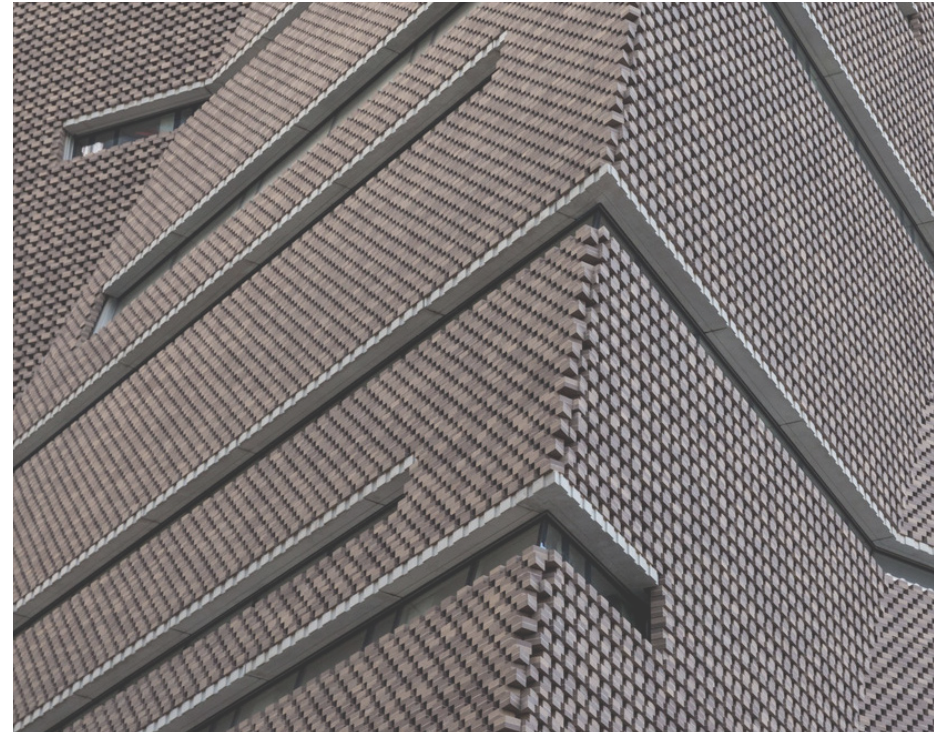
### Tate modern, London

The original purpose of the building was Boiler House which was then adapted to the museum functions by Herzog & de Meuron in 2000. It quickly became a landmark and an internationally praised example to reuse architecture. An impressive transformation was applied to Turbine Hall which was turned into an exhibition space for large sculptural or installation art. This transformation has attracted many artists to create colossal artworks which would transform the space and play on our perception of scale. (Herzog & de Meuron, 2016)

In 2016 the same architecture office was commissioned to design an extension for Tate Modern – The Switch House. The exterior borrows inspiration from the solid expression of the existing building yet creates a contrast with a more contemporary

interpretation of brutalism. The brick cladding is laid in perforated lattice allowing light into internal spaces as well as creating a sense of lightness when the building is illuminated from the inside. (Herzog & de Meuron, 2016)

The Turbine Hall is a new generation of exhibition spaces where grandiose spaces attract grand artworks. The transformation of the atmosphere itself is quite extraordinary. The artwork can fill up the space and yet it is mostly space that it contains. One main attribute of the hall is its versatility and its ability to create a focal point due to its proportions. The spaces of the new extension have a more modern look. The light is controlled through a strategically placed opening and a perforated cladding allows an interesting play of shadows.



Picture 8. Source: Archdaily:  
Tate Modern- Iwan Baan, 2016







Picture 9. Source: Olaf Urelia's website  
The weather project - Jens Ziehe, 2003



Picture 10. Source: Archdaily:  
Tate Modern- Iwan Baan, 2016



## Stedelijk, Amsterdam

Located in Amsterdam, Netherlands the new extension for Stedelijk Museum became a prominent landmark, mainly thanks to its unusual shape resembling of bathtub. The original building was designed in 1895 by A.W. Weismann, who was successful in implementing spacious exhibition rooms with access to natural light. However, as the museum expanded, the additional functions would require much larger spaces. (Bentham Crouwel Architects. 2013)

The new extension, designed by Bentham Crouwel Architects and completed in 2012, relies strongly on the existing attributes of the original museum. The new addition does, however, provide a more suitable entrance with new public functions. The new volume creates a statement within the surroundings and at the exterior

engages with a dialogue of opposition, which then is seamlessly blended within the exterior arrangements. From the inside, all the functions naturally lead to one another, and separation between old and new is not so prominent. (Bentham Crouwel Architects. 2013)

One of the attributes worth mentioning is the regulated circulation of users. An enclosed tube was designed for the purpose of an undistracted experience, where the visitors can travel from the lowest levels towards a new exhibition hall without passing through the main hall twice. The new exhibition hall is also connected with the existing museum spaces, therefore, creating a complete guiding loop for the visitor's experience. (Bentham Crouwel Architects. 2013)

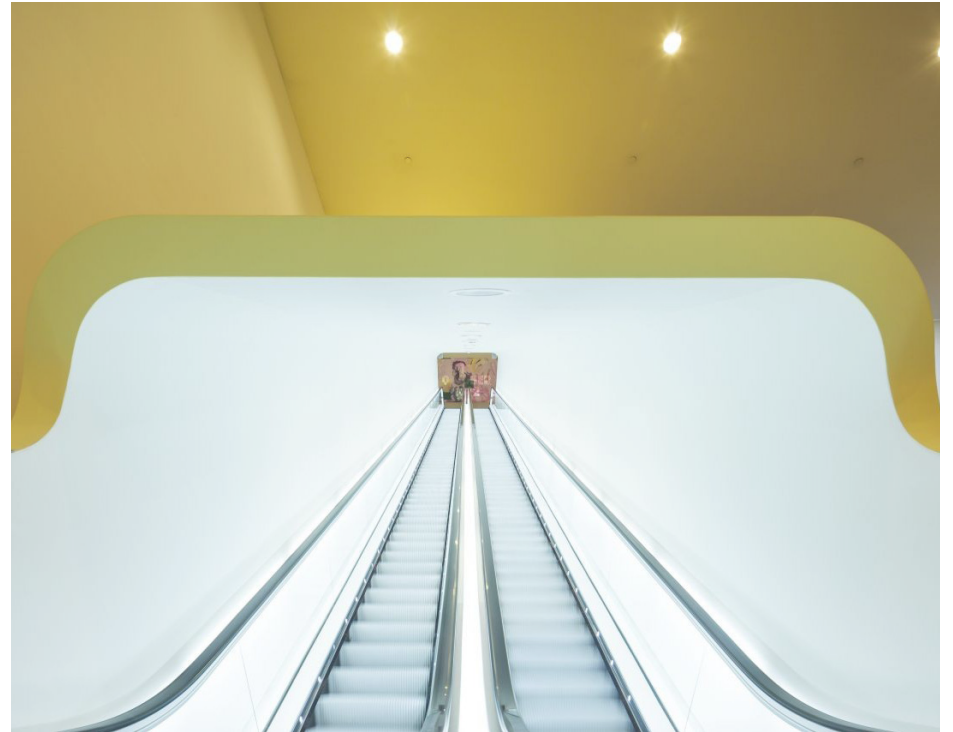


Picture 11. Source: Archdaily:  
Stedelijk- Jannes Linders, 2016





Picture 12. Source: Archdaily:  
Stedelejck- Jannes Linders, 2016



Picture 13. Source: Archdaily:  
Stedelejck- Jannes Linders, 2016

## V&A, Dundee

In the new V&A (2018) building Kengo Kuma drew inspiration from the features of local landscapes – impressive rock formations spread across the Scottish coastline. The exterior cladding is meant to mimic the organic patterns on the landscape. The unusual shape was developed together with engineers in order to make the construction possible and as efficient as possible. (Johnson, S., 2018)

The brief for the museum stated the importance of the connection of the new landmark with its surroundings, creating a link between the River Tay and the city Centre. The architect achieved that by providing a passage between the main volumes from the main street toward the waterfront. To strengthen the relationship of the building to the water, a larger water pool was integrated into the landscape.

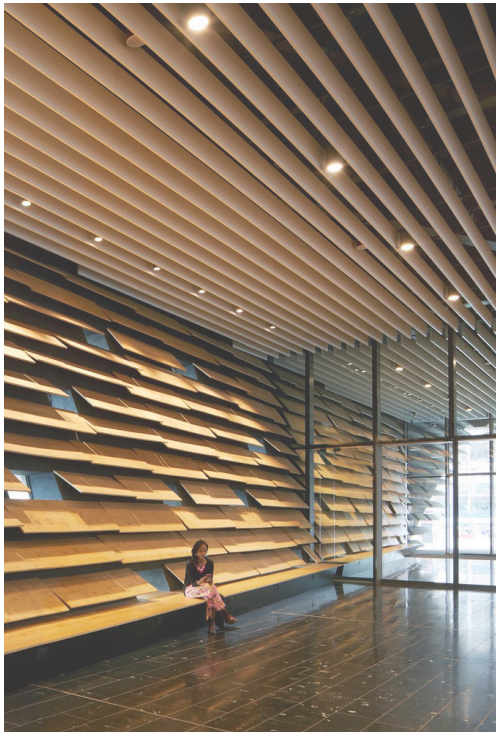
(Johnson, S., 2018)

The interior is mainly clad with timber and bamboo, giving the spaces a warm and welcoming feeling. At the center of the building, there is a large multifunctional space that is open to the public and is meant to function as a “living room”. The idea was to provide public space within the building and engage the general public with the art and culture. (Johnson, S., 2018)



Picture 14. Source: Archdaily:  
V&A- Hufton+Crow, 2018





Picture 15. Source: Archdaily:  
V&A- Hufon+Crow, 2018



Picture 16. Source: Archdaily:  
V&A- Hufon+Crow, 2018



**programming**

## User analysis

To develop the internal functions of the museums, besides the working staff, four main user groups were identified. These include students, unemployed, working adults (with or without children), and retired users. Considering the most vulnerable groups such as the elderly and unemployed the resulting program is taking into account the accessibility, both physical and economical. The Museum of The Future is most importantly a public building that should be reflected in the quality of free-of-charge functions.

Through user analysis, these functions were further developed and organized in a way that would provide clear circulation and simple wayfinding. Depending on the future demand some functions can be extended, added, or altered.





### students

During the pandemic, many students were faced with decreased well-being due to restrictions on the use of public premises. This user group requires direct communication with their peers for constant exchange of information, learning, and motivation to study. There were 51 192 students in the capital area in 2019. This number includes mature students as well, so the group includes a broad age variation. (Statistics Finland. 2021)

#### Needs:

- Suitable learning environment
- Place to gather with peers
- Access to information
- Spaces dedicated to the field of Architecture studies



### unemployed

Those that have financial and health difficulties are one of the vulnerable groups of society. There were 31,830 unemployed job seekers in Helsinki by the end of 2017. (City of Helsinki 2019) For this group having an efficient sense of routine is crucial for their well-being. They require public spaces that are free of charge and are inclusive of all, where they can learn, apply for jobs and engage with other people.

#### Needs:

- Free of charge gathering space
- Possibility to volunteer
- Access to information
- Creativity outlet



### retired

The elderly population often feels isolated, both socially and technologically. Large implementation of the design is created with new technology and there is a great learning possibility. Workshops that are aimed to engage the retired population can help them feel more integrated into society. In addition, accessibility is a big factor to consider when it comes to those with mobility issues.

#### Needs:

- Workshops open to all ages
- Accessable spaces
- Smart layout close to services
- Meeting place



### working adults (and their kids)

Usually, those with full-time work responsibilities have little free time during the week and need a possibility for active relaxation during weekends. Those working remotely have more flexible mobility and can make use of good lunch options and a place to answer emails or meet a co-worker. Those with children also require stimulating environments for younger brains.

#### Needs:

- Restaurant/cafe
- Flexible sitting spaces
- Workshops for children
- Interactive exhibitions
- Active outdoor spaces

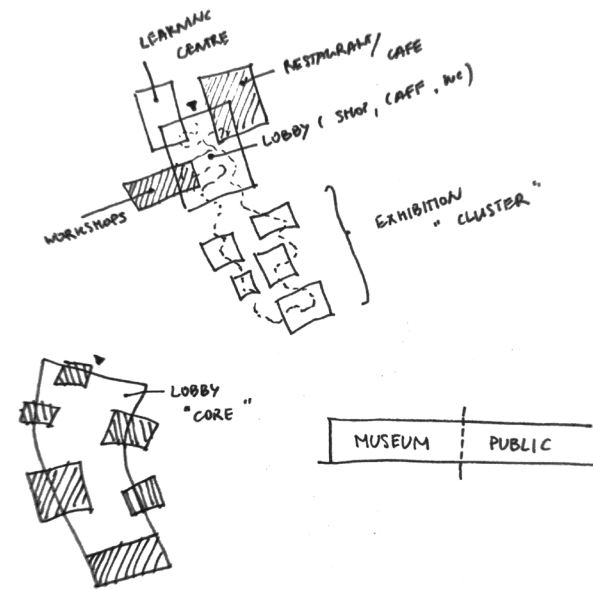




## Conclusions & guidelines

The main entry points of the new structure should be visible from the most public location and have clear visibility from the pedestrian routes. The lobby will be open and include those public functions that are accessible to all as well as supporting services. Additional public functions such as libraries and workshops should be visible from the entry point and have a separate circulation space to avoid a clash of users.

The library, sitting area, and food service should be near one another as these will create a free access public space. It will be an important section of the museum and should be designed accordingly. It should also be clear from the zoning of functions which spaces are free of charge and where the users will require ticket purchase.



**Public 820**

Lobby .....	180
Sitting area .....	100
Gallery zone .....	200
Info/Tickets .....	40
Lockers .....	80
Toilets .....	140

**Learning 650**

Workshop .....	130
Library .....	280
Lecture Hall .....	100
Student society .....	140

**Commercial 460**

Cafe .....	80
Shop .....	60
Restaurant .....	200
Kitchen .....	70
Loading .....	25
Waste room .....	25

**Staff 400**

Open office .....	130
Meeting rooms .....	110
Directors office .....	15
Reception .....	10
Changing rooms, toilets .....	70
Kitchen and dining .....	60

**Exhibition 1400**

Temporary exhibition .....	320
Permanent collection .....	240
Interactive exhibition .....	400
VR room .....	45
Design simulator .....	95
Workshop .....	100
Archives .....	70
Exhibition building room .....	100
Storage .....	30

**Outdoor functions 2230**

Sculpture park .....	300
Wood terrace .....	660
Outdoor sitting .....	120
Playground .....	250
Carpark .....	900

**Circulation, storage, services 1130**

<b>Total programmed indoor area .....</b>	<b>4900</b>
<b>Total programmed area .....</b>	<b>7130</b>

**design**



### *Context and footprint*

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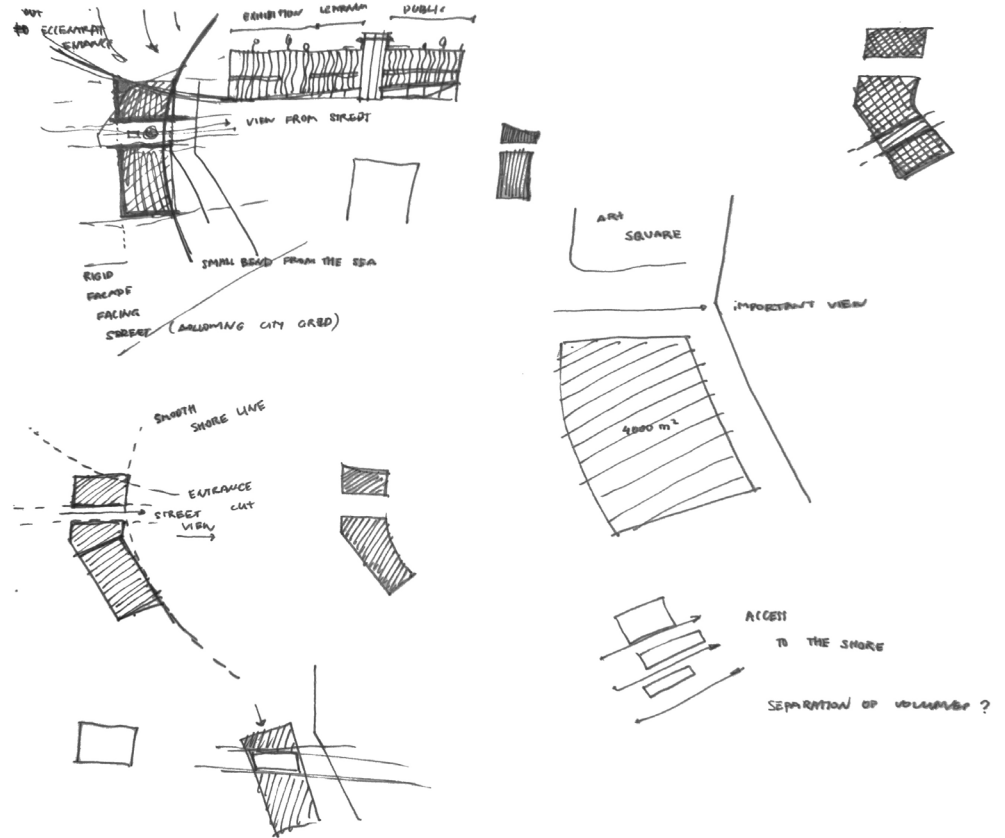
The point was to create a foremost public building in a public context where there will be a place for communities that are interested and are involved in the design world. It was also an attempt to challenge a bit the concept of a landmark and how can a design reflect the intent and the attraction point that will come through the interaction of users rather than flashy materials and overscaled spaces.

The new museum sits well within its context and does not overpower the site. It is placed close enough to the water shore to allow direct views towards the sea yet leaving enough space for outdoor functions.

## Massing and position

The building itself is slightly offset from the main road to create a small buffer zone and protect from noise while still allowing an efficient connection to access the loading spaces.

The overall shape of the buildings was inspired by the gentle curve of the sea-shore. It allows the building to “hug” the outdoor spaces creating a more intimate relation to the external functions. The scale of the structure considers the surrounding buildings. Sufficient daylight was another factor guiding the shape of the museum. Its depth should allow enough sunlight for most public functions.



## Design stages

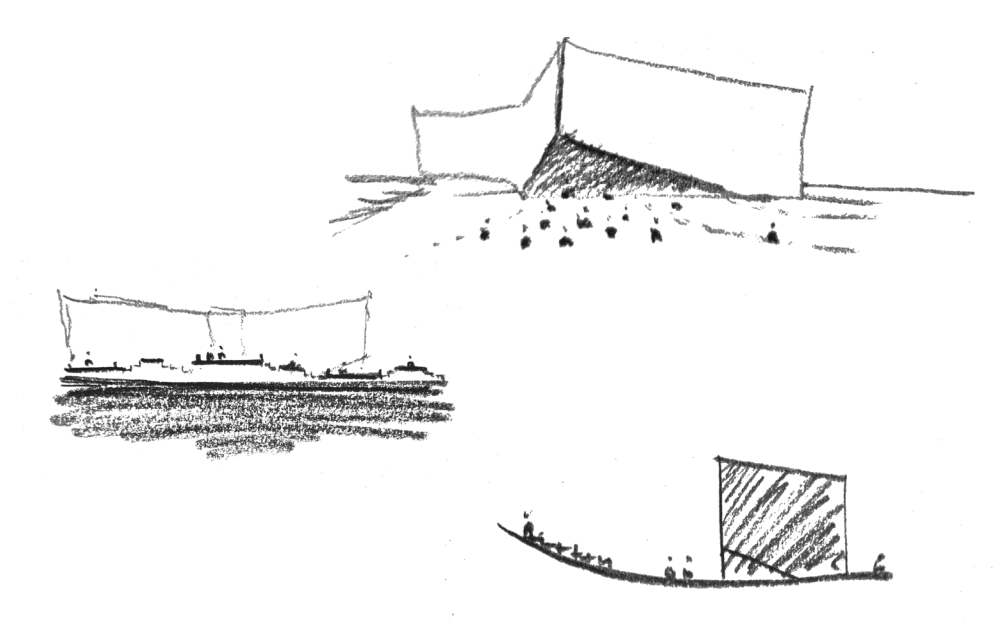
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As in many public buildings, an obvious and well visible entry point is a crucial aspect. To highlight the main entrance of the museum, part of the façade is lifted upwards a few meters to create a canopy and guide the users inside.

An important elevation is the one facing the sea as it will be visible from the approaching boats. To relate to its water contexts, a playful curve is introduced into the building's roof profile.

The next step is to activate the shore by providing changes in level for fun interaction with the surroundings.

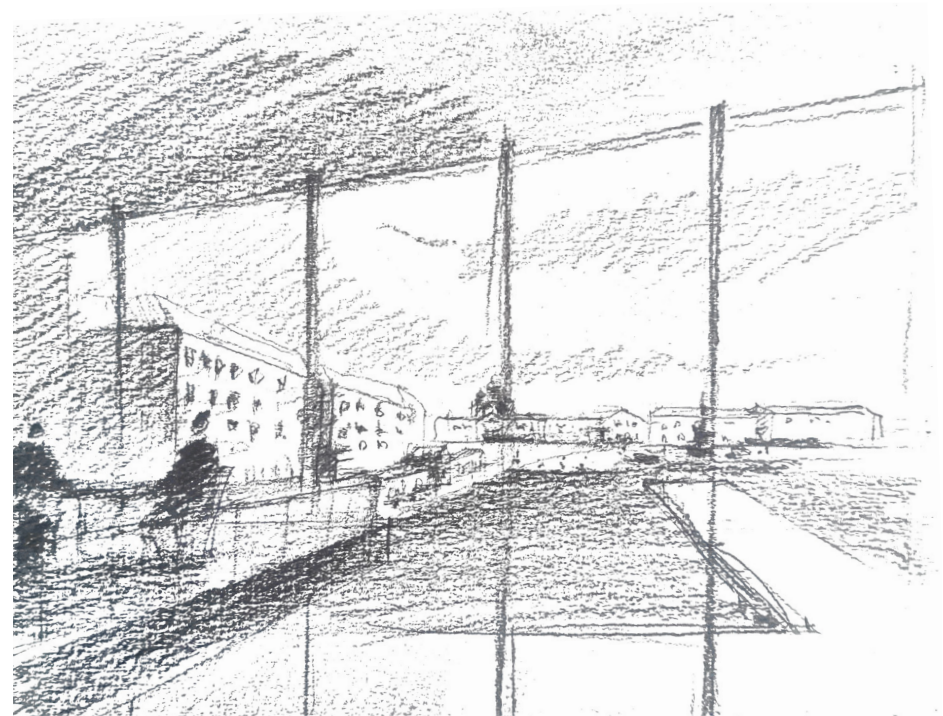
One of the crucial aspects was to preserve the existing view of the sea from Makasiinikatu. It will also allow the users to enter the building from the side and then be guided toward an elevated observation point.



### *Important views*

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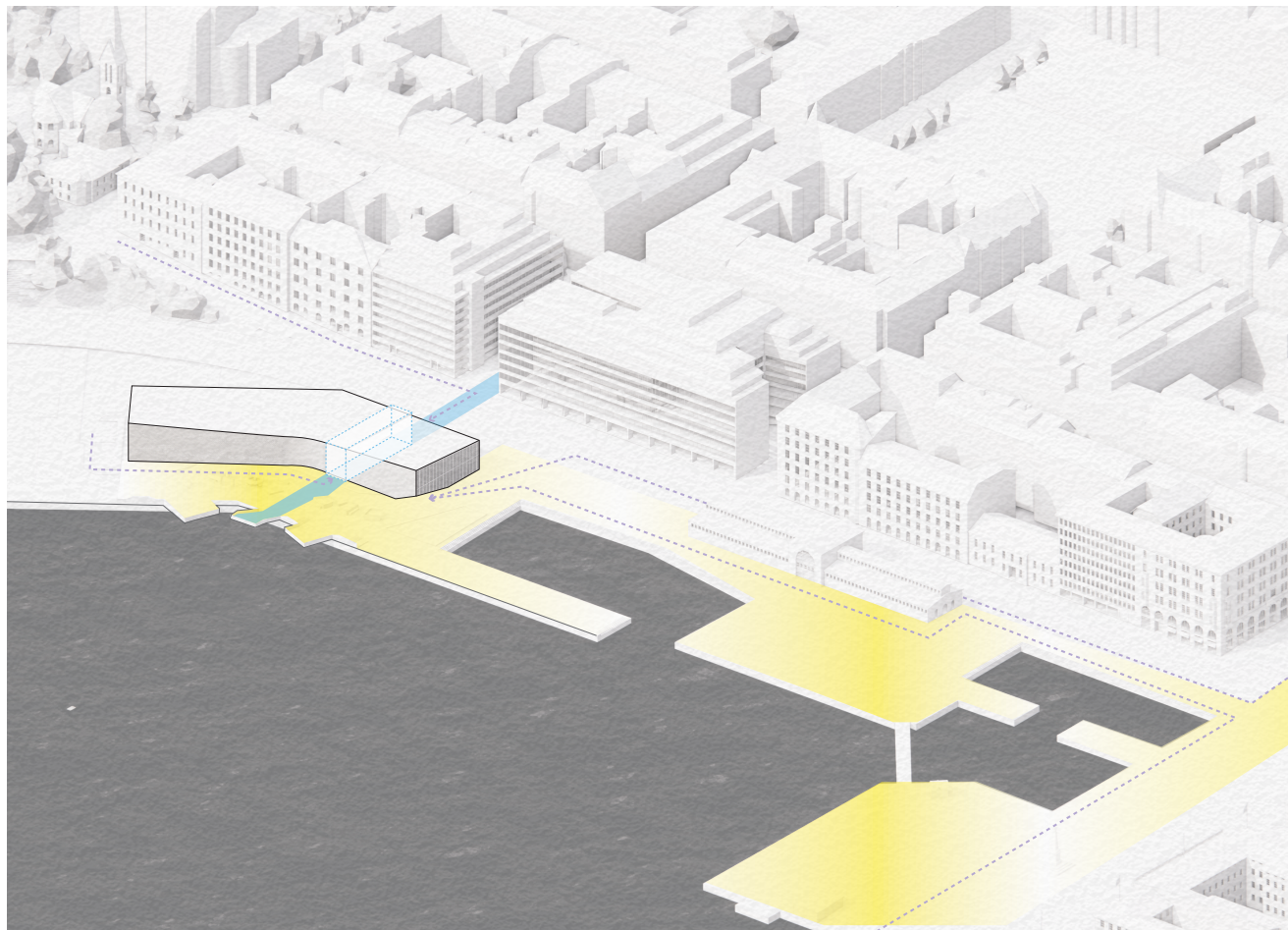
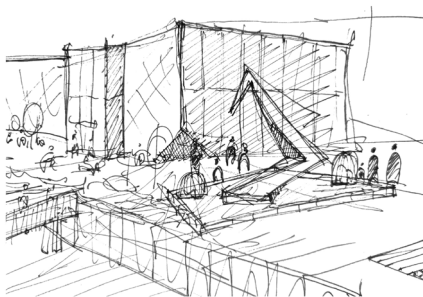
Communication with the surrounding is a key element in the decision-making process. Each view provides a meaningful connection to the historical context of the site. The main entrance as well as the restaurant views are facing toward the market square where the Helsinki Cathedral is also visible in the distance. These views are important not only in the sense of locating oneself in the urban context but also to highlight that the building aims to integrate itself with the surroundings and become part of the master plan.



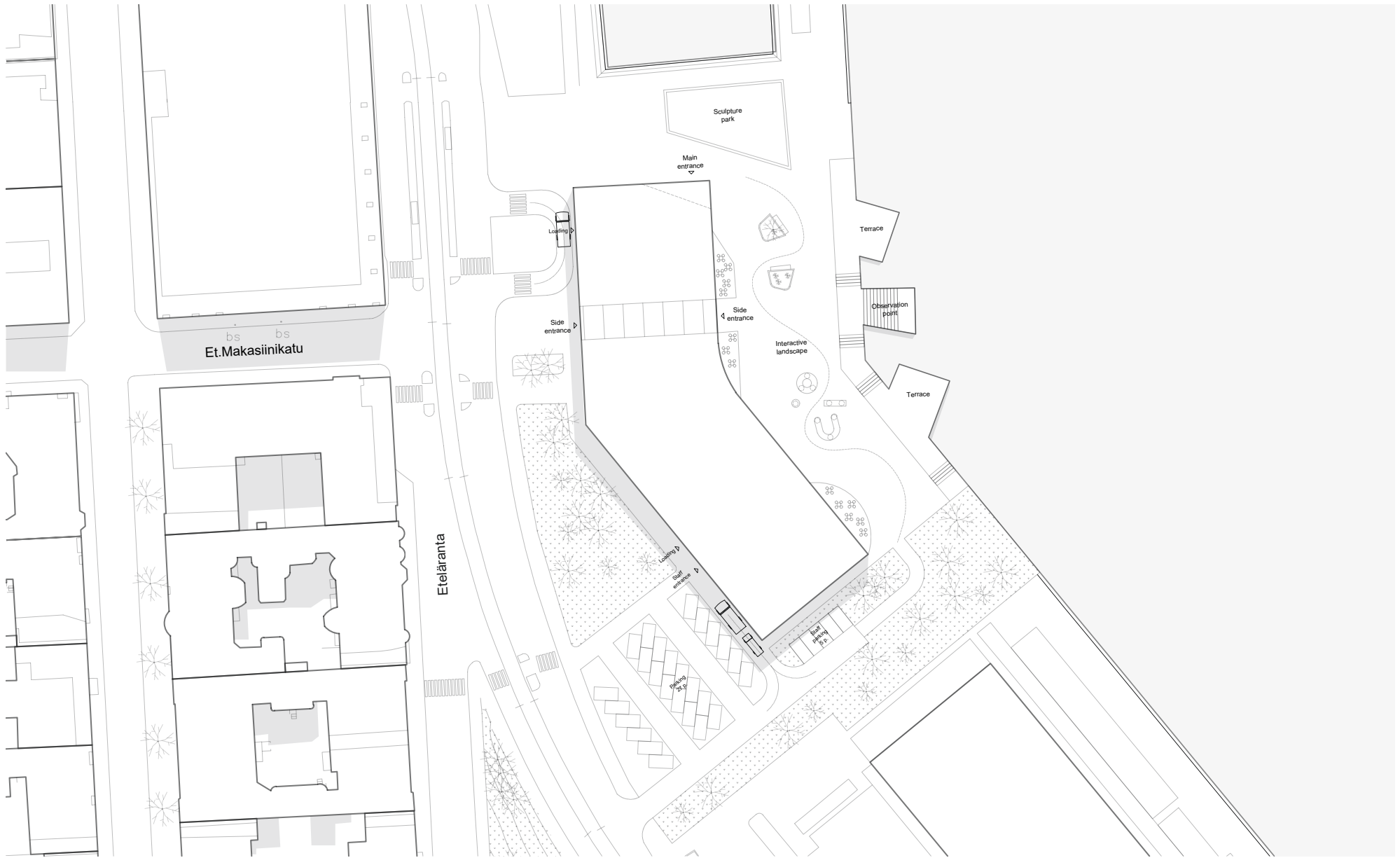
## Approach

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The new structure will become a new activity node in the South Harbour. It will also direct the users past the Market Hall creating a complete chain of interaction points. Those approaching from the main city center route will use pedestrian paths already present. Users arriving by car can use the carpark at the back and will then enter from either side entrance or walk towards the main one. The users arriving from Kaivopuisto are guided towards the side entrance of an open gallery. Each approach is significant in its journey and allows for different experiences.







Site plan, scale 1:1000



## Surroundings

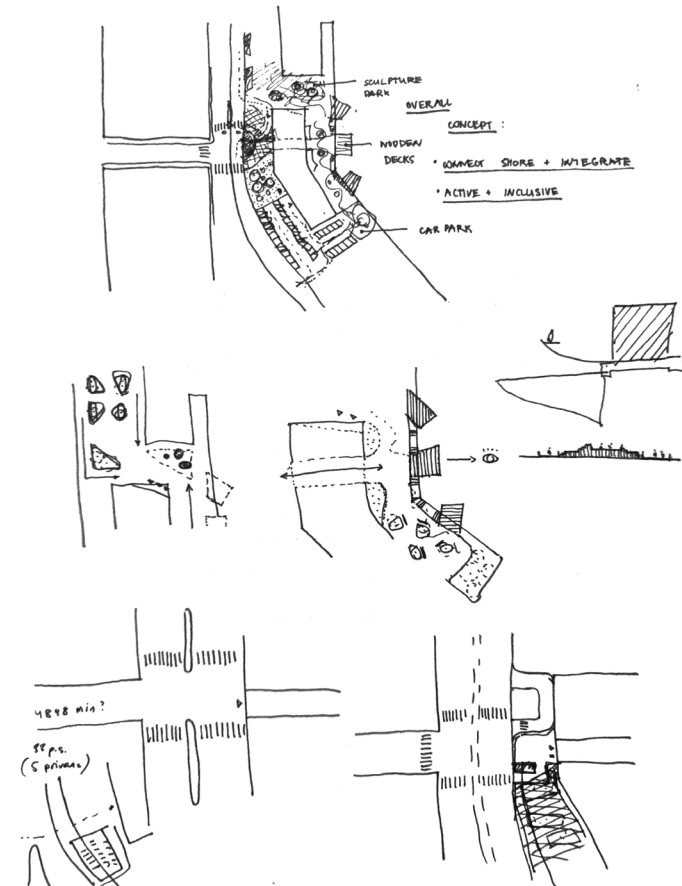
Integration with the context as well as activation of the surroundings were the key aspects of the exterior design. Thinking through the possible approaches both for pedestrians as well as those arriving by cars was the guiding element. Each route was then developed to ensure a convenient and clear passage toward the main entrance.

Taking into consideration the existing infrastructure and creating new pedestrian pathways helped to understand the role of the building in its context. Existing routes were slightly altered to divert pedestrians away from the road and lead them towards a more pleasant route between the facade and a new park.

The next step was to plan out the delivery of services and how separate the

delivery traffic from the visitors. Since the current plot is now being used as a car park the approach to the site by car was rather straightforward. With the help of the current arrangement of internal functions where the services are located at the "back" of the building, the delivery points could be conveniently placed in close proximity to the main road.

The new activities at the shore were designed in order to engage the users with the waterfront. By extending wooden terraces the users can feel even closer to the water, similar to canal terraces so popular in Amsterdam. The intent was to provide a lively and active atmosphere with spaces to play, walk, sit and observe.



### *Exterior design concept*

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The entry points to the building not only guide the users but also distribute activity efficiently around the site. The new landscape will provide a point of attraction to support the outdoor function both for public benefit as well as for the museum's. Terraces provide new concentration points for the users to enjoy during warmer times of the year.

The position of greenery around the building strategically provides a buffer between the road and the museum. It also provides more pleasant views from the workshops, library, and office parts.



## Zoning

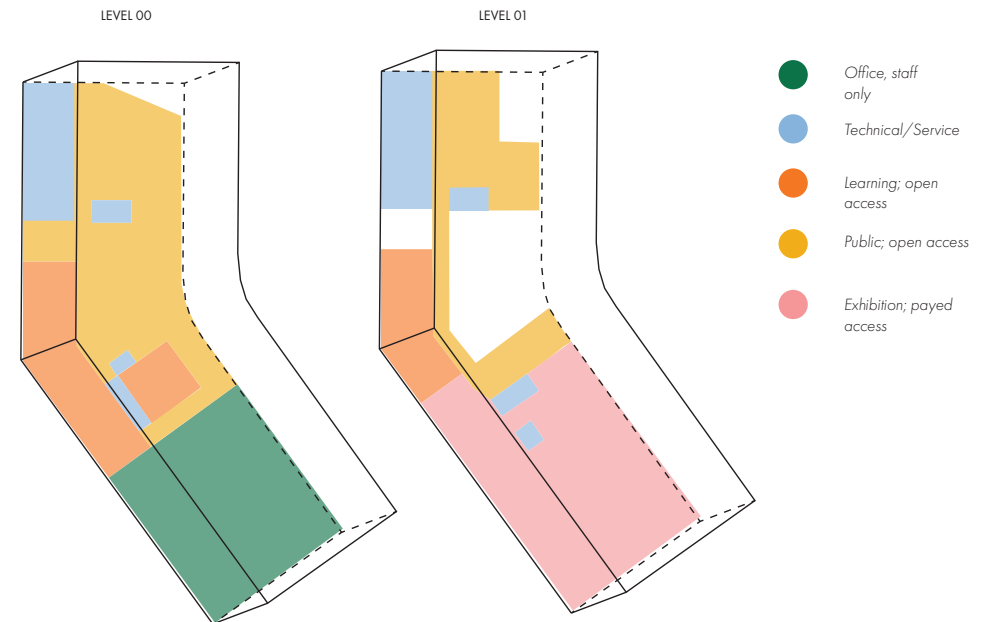
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The museum is divided into public and semi-public. The entrance zone ensures direct interaction with the landscape. It also allows the most vulnerable in society to feel welcome in the building. There are spaces for different types of activities that do not require payment but will be funded by the municipality. The students will be able to directly engage with the museum staff and will have a great space to organize collaborations.

It is important to note that the open public zone will also include exhibitions that are free of charge and accessible to everyone.

The staff spaces are placed at the end of the building to prevent any unnecessary crossovers between staff and users. This decision also allowed easy access to the

exhibition spaces above. With a direct vertical connection between the exhibition building room and exhibition spaces, the staff will be able to organize new collections without being disturbed.







*View from the main entrance, towards the lobby.*

Materials used in the treatment of interior surfaces were chosen based on the combination of environmental considerations, durability, and the desired atmosphere of the interior. To complement the structure of massive timber the lobby area together with its functions is treated with timber flooring. This will provide a more natural and welcoming feel for the future users of the museum.

Right above the main entrance and information desk, there is a void to provide a sense of space directly upon entry. The lobby contracts under a lower ceiling to give an intimate atmosphere for the café users. It was a conscious choice to allow clear visibility of the main vertical connection, so the building is easy to navigate. The elevator and stairs located right in the lobby area provide access to the restaurant/ event space and do not require tickets prior to use.

From the café, located just behind the main info desk, the users are able to observe the main circulation areas of the ground floor. The café is adjacent to the open gallery zone which also serves as the main corridor of passage between the street and the outdoor terrace. Just as the gallery starts the ceiling rises up several meters creating a sense of a large-scale structure, filled with light.

Like many functions on the ground floor, the café also provides picturesque views of the sea and during warmer months there is a possibility to use an outdoor terrace.



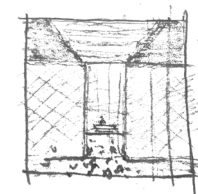
*View from the cafe on the ground floor, towards the open gallery and stair to first floor.*



*View from the open gallery, towards the side exit and outdoor terrace.*

This view of the open gallery communicates best the special connection between the urban context and the sea. The users are guided through this bright and airy passage to reach the active waterfront. While passing through there is also an opportunity to slow down for a moment and take a look at the free exhibition that provides a brief introduction to the museum's history, current exhibitions, and future agendas.

For those approaching the building from Kaivopuisto or by car, this will likely be the main entry point and is therefore meant to impress upon entry.





The grand staircase leading up towards the main exhibition space serves several functions besides the obvious one. It creates a focal point of the ground floor and divides the space into different functions. To the left we have a sitting space that can be used for reading, working, or simply contemplating. The views and plenty of daylight provide the desired atmosphere making this a special public space.

Directly behind the entrance on the side of the stair, there is a lecture hall that will be used either by the museum or the Architectural Student Society. The sitting area next to it, in that case, becomes a meeting spot for those who came to hear the lecture.

To the right of the stair, the functions are more practical in nature, such as workshops and a library.



View from the cafe on the ground floor, towards the open gallery and stair to first floor.

The first floor repeats a similar functional spine as on the ground floor. The exhibition spaces located at the northern end of the building provide a flexible layout where temporary wall structures can be assembled, following the structural grid. Spaces facing the sea have an opportunity to be illuminated by daylight depending on the type of exhibition.

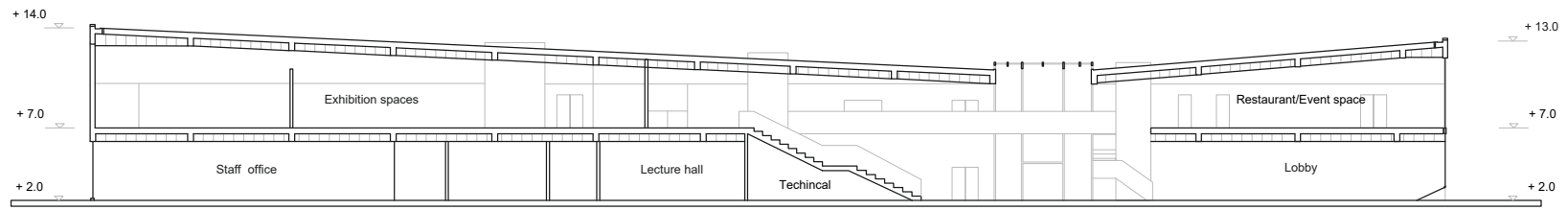
Along with the familiar functions of the workshop and library, there is a connecting bridge leading toward the restaurant/event space. Passing through the building the user will be once again, offered wonderful views down to the ground floor and the open gallery.



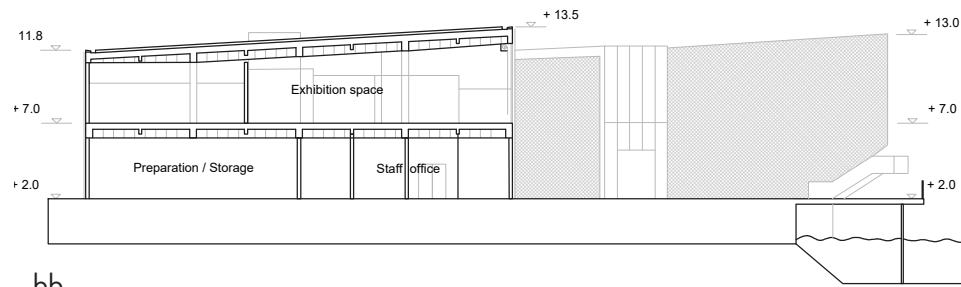
Exhibition spaces that can be exposed to direct light will be more of an interactive nature. These types of exhibitions encourage the users to engage with the objects in front of them instead of only observing. A good example is an open workshop where the materials provided can be used to explore creativity.

The Museum will provide a learning environment even outside of the usual workshop spaces. It will also challenge the concept of passive exhibitions and create an active dialog with the users.

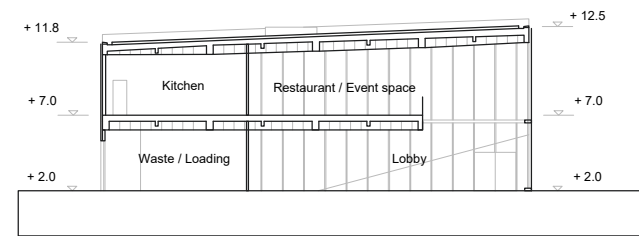




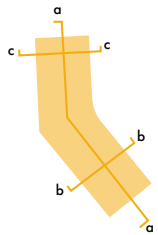
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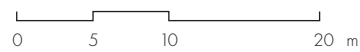
bb



cc



Sections, scale 1:500



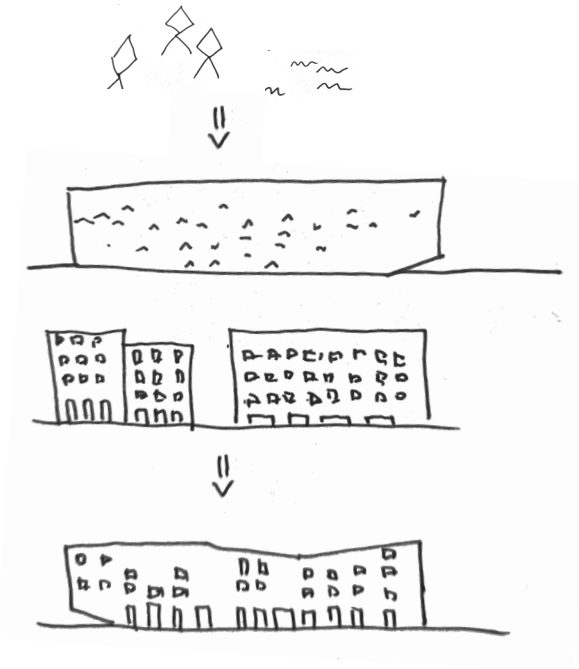
## Materiality

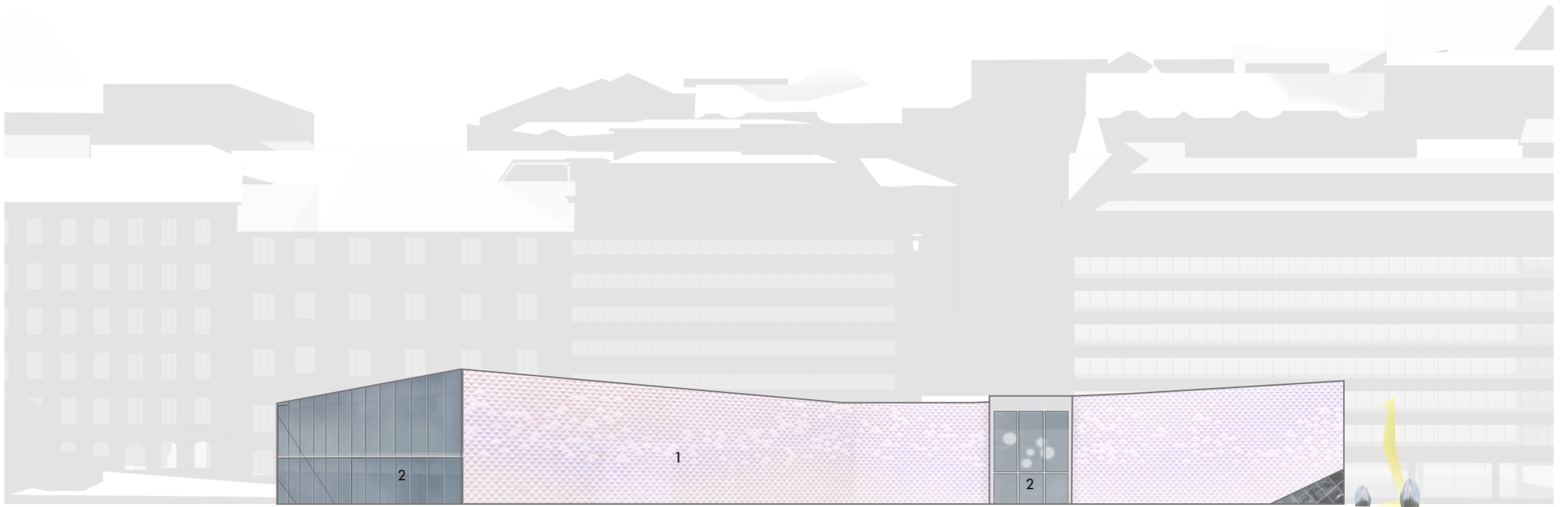
The concept for the facade facing toward the sea was inspired by the flickers of light when the sun hits the water at specific angles. The starting point was to create a diagonal grid in which middle segments would split in two, creating a repetitive horizontal segment. The shift in the segments is what will give an illusion of a light flicker, evenly distributed along the facade.

To enforce the desired effect and create a play of light during different times of the day, the segment surfaces are treated in different ways. The top part is more translucent, and the bottom part is less transparent and more reflective. Such variation will also provide an efficient amount of sun shading.

East facade faces an urban context and

in order to create a response to the surrounding buildings, the facade treatment is more solid and follows a different rhythm, mimicking window arrangements of historical buildings. In order to keep the harmony of the facades in relation to each other, the diagonal grid remains present on the east facade. Copper is the cladding material chosen for the facade due to its durability, possibility to be recycled, and association with the shipping industry.





West elevation, scale 1:500

- 1 Triple glazed curtain wall
- 2 Glass
- 3 Recycled copper panels



East elevation, scale 1:500

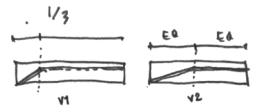


FACADE SYSTEM IDEA:

GRID:



PLAN/SECTION:



OR

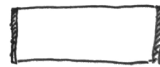


3 LAYER GLASS ?

ONE WITH TINT  
ONE THAT REFLECTS  
ONE THAT BENDS



GLASS



FRAME

LIKE FISH IN THE SEA

NEW MUSEUM !!!

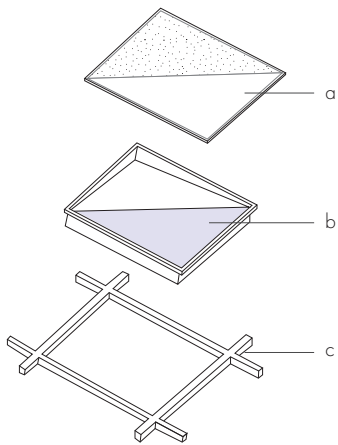


WOW!!!

## Facade design

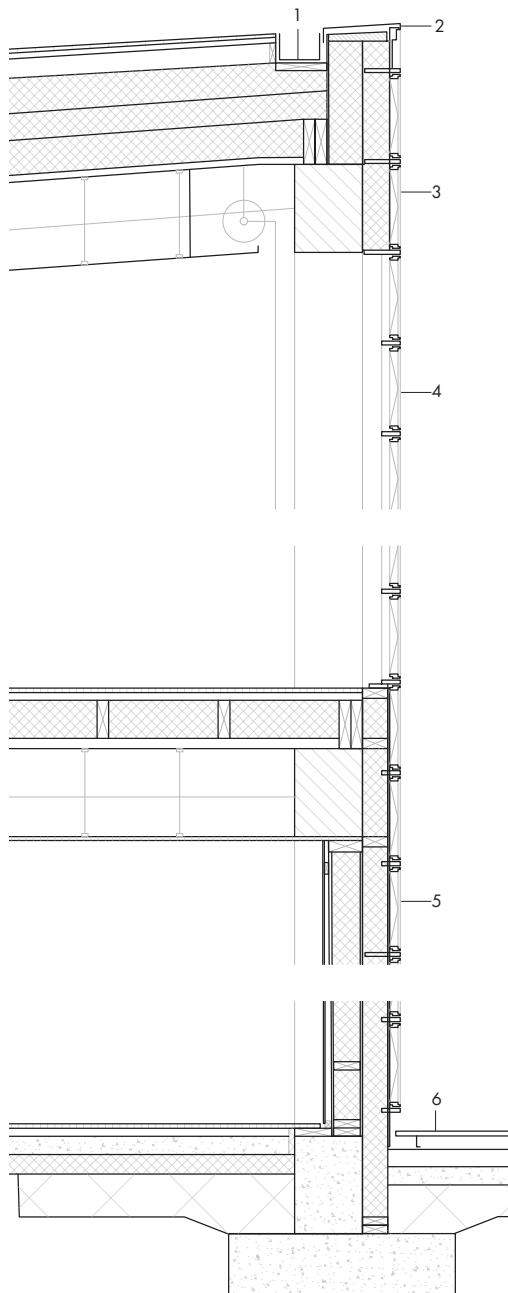
The purpose of chosen facade material was to create a play of light and reflections that will resemble the play of light in the waves. Because of the diagonal grid and chosen materials facade almost mimics the skin of a sea creature. This additional effect strengthens the connection between the building and the sea.

The technical aspects were developed with the help of a reference project - Futurum in Berlin, designed by Richter Musiowski. It uses a similar principle of a diagonal grid glass facade that also acts as structural support. (Detail, 2018)

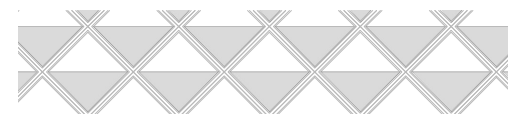
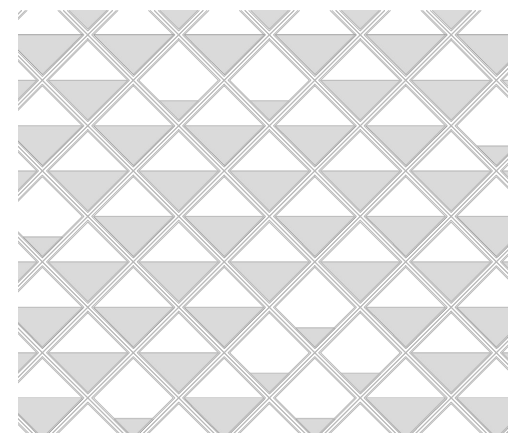
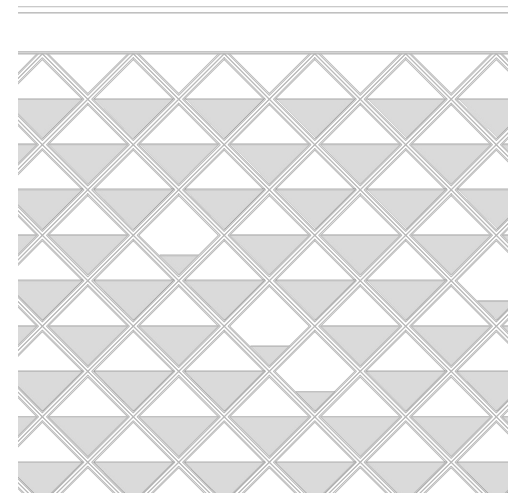


- a laminated safety glass that contains cast glass and screen printed with dots
- b folded glass with a reflector on one side inside adapter profile
- c substructure of diagonal aluminium tube with a sealing strip

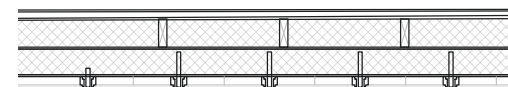
- 1 copper roof gutter
- 2 aluminium cover flasing
- 3 thermally insulated glass panel, 20mm ventilation gap, 300mm mineral wool, timber loadbearing beam
- 4 glazed facade : triple glazing with sun protection, mul-tion-transom steel tube diagonally welded
- 5 back ventilated glazed facade, 320mm mineral wool, 12mm plywood panel, 20 mm air gap, 11 mm plaster board finish
- 6 outdoor pavement panels, 100mm structure, 100 mm concrete, waterproof insulation for the ground



Detail section, scale 1:50



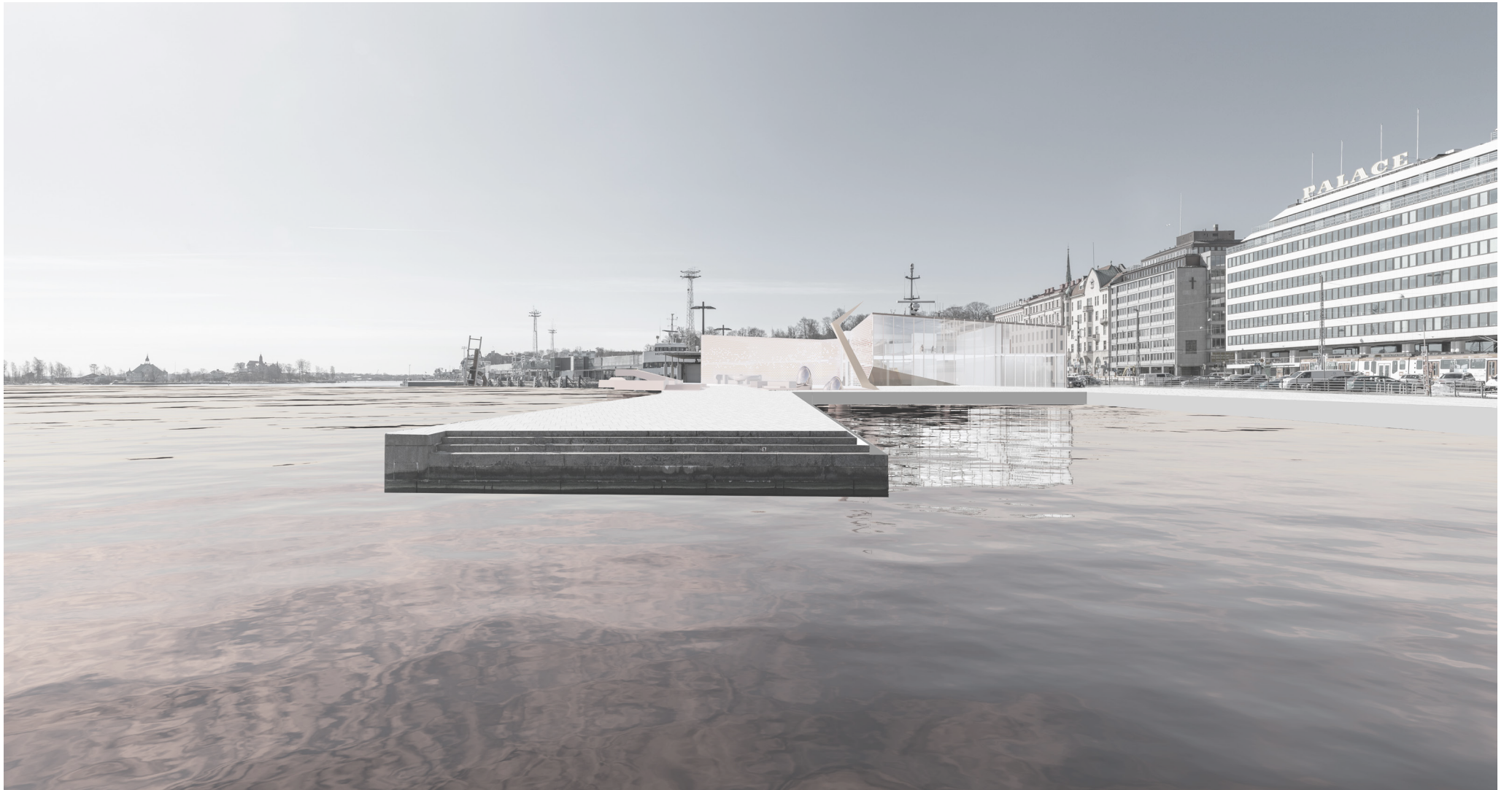
Elevation, scale 1:50



Detail plan, scale 1:50









# conclusion

## Summary & future development

The New Museum for Architecture and Design proposal draws inspiration from its context and the desired contribution of its inner functionality to the city. Its relation to the surroundings provides a strong connection between the urban environment and the seaside. The proposal attempts to maximize the use of the plot by providing suitable outdoor functions that strengthen users' connection to the sea. The human scale was the guiding element of the project scope, resulting in a more compact design that doesn't overpower the site but is related to the surrounding buildings.

Functional programming was carried out in consideration of accessibility, both physical and social. The inner functions mediate between public and semi-public, providing an environment that is inclusive and welcoming to the vulnerable groups of society. Together with functions, the overall experience of the spaces was careful-

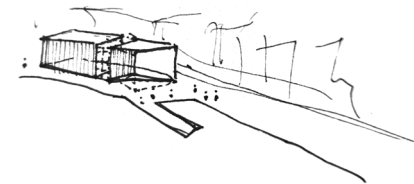
ly planned out. The views provide visual connections with the historical parts of the city and allow communication between the users and the landscape.

The quality of spaces was strengthened with sustainability goals in mind such as the building's orientation and choice of materials. An open and bright ground floor provides views of the water and allows plenty of daylight through the glazed façade. East elevation relates to the urban context with window placement and more closed-off nature, protecting the technical functions behind it.

The challenge of the design was to create a functional layout suitable for a museum. The precedence study helped to figure out possible functions that can be included in the program as well as the size of the spaces.

The part that would still require some further development is staff premises. The suggested layout covers the most essential spaces however a further study together with the future staff would need to be carried out to provide the most efficient layout.

It would also be interesting to investigate more regarding the levels of accessibility of public buildings in the future. It is possible that both libraries and museums can be potentially transformed into fully free of charge public spaces that can provide a place to study, work (outside of museum staff), and socialise.



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Picture 2: The City of Helsinki. [online] Available at: <<https://makasiiniranta.hel.fi/fi/kilpailualue/>>  
Pictures 3-7: Helsinki City Museum. [online] Available at: <<https://www.helsinkikuvia.fi/>>  
Picture 8-10: ArchDaily. [online] Available at <<https://www.archdaily.com/788076/tate-modern-switch-house-herzog-and-de-meuron>>  
Picture 11-13: ArchDaily. [online] Available at <<https://www.archdaily.com/350843/stedelijk-museum-amsterdam-benthem-crouwel-architects>>  
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Original site photos: Provided by the City of Helsinki

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