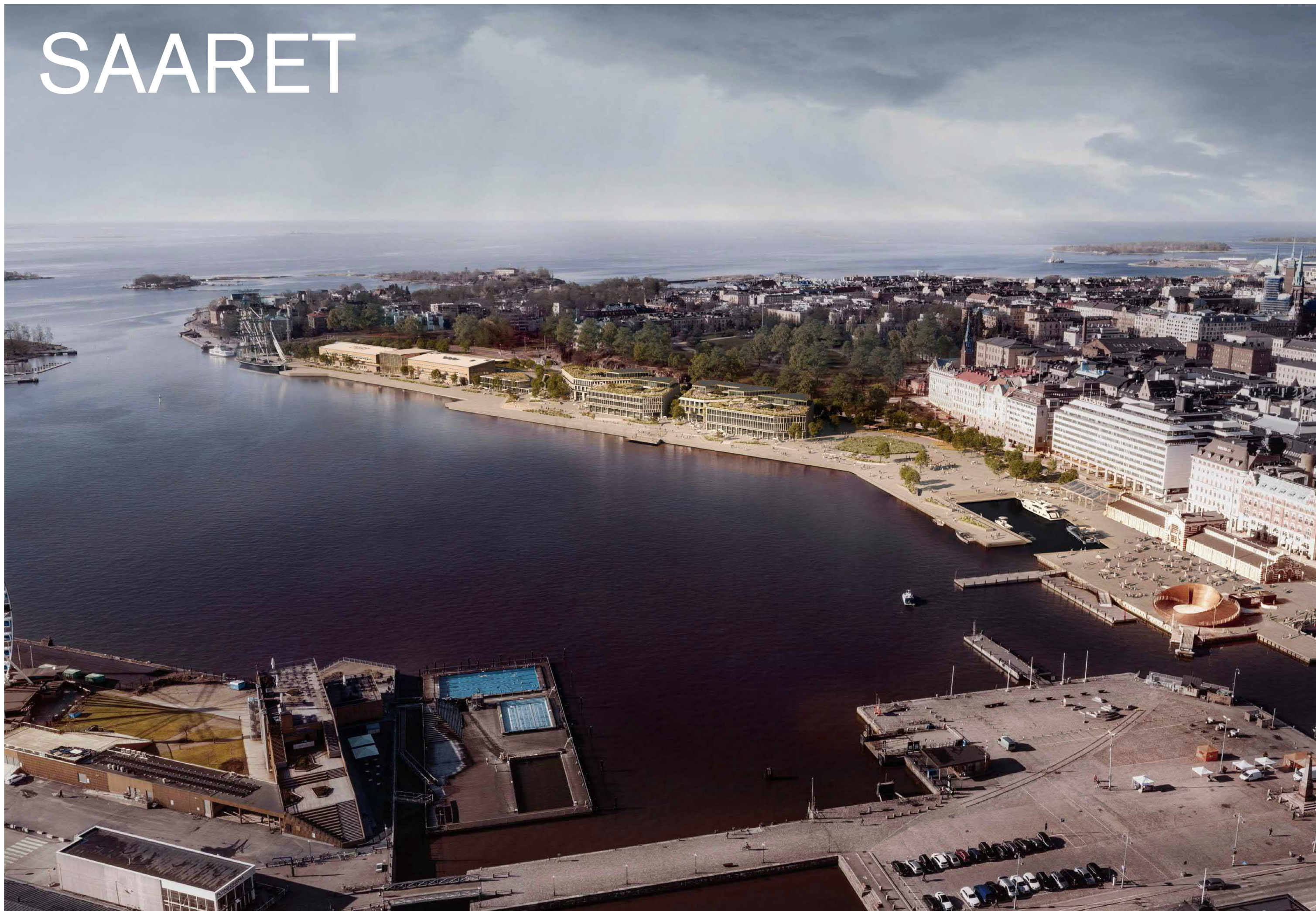


SAARET



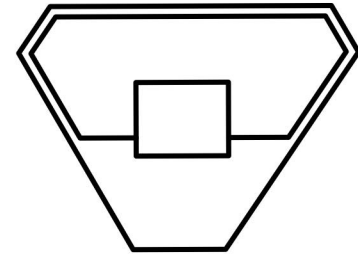
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SAARET transforms a closed terminal area into a lively public waterfront. The new built landscape creates a natural continuation to the national maritime landscape of Helsinki. The combination of low carbon new construction and adaptive reuse form together a new landmark for climate-smart Helsinki. The future Architecture and Design-museum is a strong motor in the development of the site, and we firmly believe that it should display sustainability and resilience.

The seashore pedestrian route will join Kauppatori in the north and Kaivopuisto in the south with a rich sequence of squares and parks. Tähtitorninvuori park extends towards north and the smaller green routes reach towards the seashore.

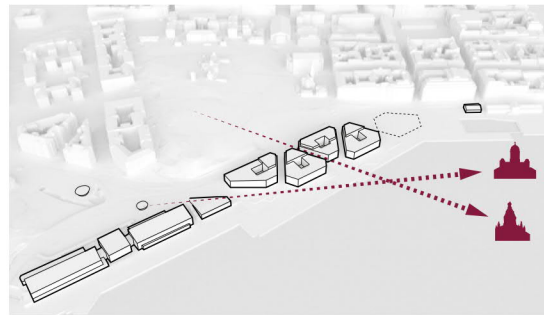
In both ends, strong public nodes define the area and attract people into the inner parts of the site. The ground levels of the new buildings are open to the public in cafés, restaurants, galleries and shops. There are a variety of working environments from the ground level to the top floors and two hotels for visitors.



1. Urban concept

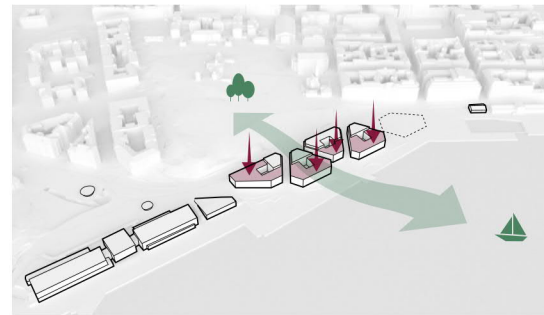
1.1 Urban strategies

Urban concept



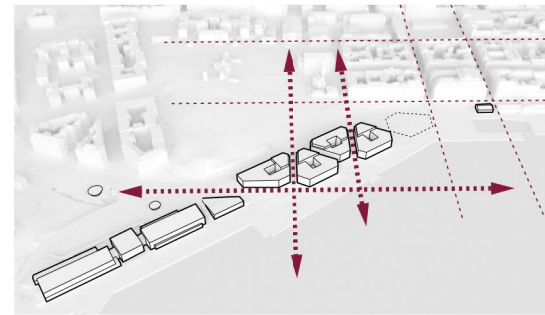
PRESERVED VIEWS

The massing is laid out in a manner that preserves and highlights the views towards Helsingin tuomiokirkko and Uspenskin katedraali.



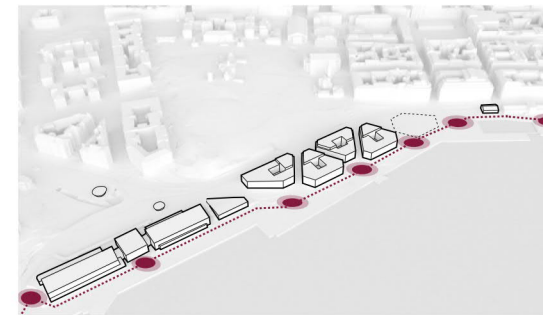
LOW PROFILE

The new buildings are kept low to preserve the water view from the Tähtitorninvuori park and also the park view from the sea.



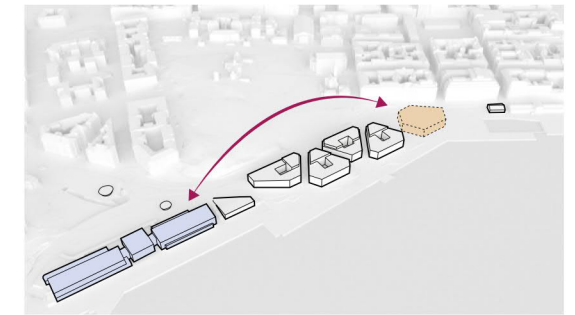
ALIGNED WITH GRID

The new streets are laid out in alignment with the existing grid of the nearby city center. Water views at the end of existing streets are preserved.



ACTIVE SHORELINE

Pedestrians can move freely along a lively and active shore.



TWO NODES

A museum at either end create strong attractors for the area.



VIEW FROM TÄHTITORNINVUORI PARK

1.2 Overall concept & identity

Urban concept



The urban structure including the new buildings is part of a larger landscape formation inspired by the cracking bedrock of the shoreline. The closed terminal area will be transformed into a lively public waterfront. The new built landscape creates a natural continuation to the national maritime landscape of Helsinki. The shoreline identity and the sea can be experienced in various ways: long vistas to the sea, touching the water and relaxing next to the water.

The new buildings can be recognized as clearly distinguishable new architecture. By levelling the ground of the area with Laivasillankatu barriers are overcome and new connections bring people easily down to the water. The seashore pedestrian route will connect Kauppatori in the north and Kaivopuisto in the south with a rich sequence of squares, plazas and parks.

In both ends of the competition area, strong public nodes define the renewed waterfront and attract people into the inner parts of the area. In the north the Tähtitorninvuori park spills down to the quay and extends towards the Old Market Hall. A new square for public events creates a zone between the new and the old area.

The first new building one encounters when arriving from the north is the new museum of Architecture and Design in the park. In the southern end, the old Olympia terminal and the Porthouse will be adapted and extended into a museum and exhibition center for Baltic sea region as well as work&exhibit spaces for artist and designers. The spaces under the decks are transformed in the first phase into temporary

event and commercial spaces. This will be followed by a more permanent transformation in 2030's. The adapted and extended harbour buildings would certainly follow principals of climate-smart Helsinki.

To activate the shoreside of the Olympic buildings a path of different activities is created. Reused materials and containers offer flexible space for small galleries, shops, play and seating.

The main volume of the buildings is located in four compact blocks in the middle of the area. They are carefully placed according to the views, adjacent buildings and height differences. The blocks create new places both on the seaside as well as on the Laivasillankatu side. The main pedestrian routes and human scale alleys between the new building blocks are directed towards important landmarks, such as Tuomiokirkko and Uspenski cathedral. The terraced geometry of the blocks can be seen as an abstract undulating continuation for the Tähtitorninvuori and Armi Ratia parks. Light post and beam wood structure allows flexibility of use. Recycled and new ceramic tiles and glass as dominant façade materials and visible timber structures in the interiors give the main identity for the area.



VIEW TOWARDS USPENSKI CATHEDRAL

1.3 Landscape

Urban concept



Olympic Square

The Olympic Square is located next to the Laivasillankatu in front of the old Olympia Terminal Buildings and the Baltic sea exhibition center. The square acts as an entrance square that offers flexible space for outdoor exhibitions and events. The square connects the Tähtitorninvuori Park and Armi Ratia Park with a large meadow that invites to explore the characteristic Baltic sea shoreline vegetation. The open square showcases different rock types in the Baltic sea area. The green islands with tree canopies offer shelter and relaxing seating areas for individuals and groups in the center of the square. The southern part of the Olympic Square can be used for skating and the square is designed so that it can facilitate temporary parking for buses which will pick up passengers from the ferry ships. In the winter this space is also used as temporary space for snow storage and play. The Olympic square is connected to Armi Ratia Park in two levels - with the underground spaces to the shaft and with new connection over the Ehrenströmintie.

Armi Ratia Park

The existing Armi Ratia Park will be changed into a modern botanical garden that offers various values to visitors and residents. The garden showcases new type of low-maintenance urban biodiversity with different dynamic vegetation types in perennials and meadows. Together with the existing impressive trees they create pleasant and informative experience paths to visitors as well as habitats to various species. The dynamic vegetation concept offers also interesting setting for research in urban ecology. The existing shaft and new pavilion will be part of the botanical experience with rich vegetation integrated to existing rough features and elements. The shaft can be covered with glass roof for year-round experience.

The Museum Park

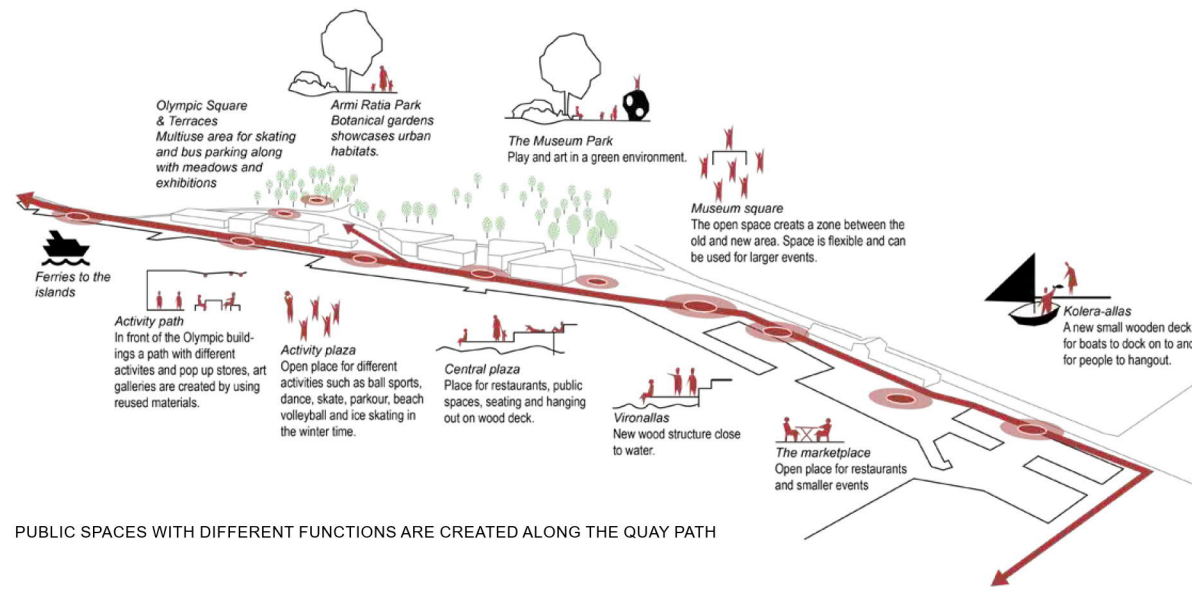
The new museum will be a part of the new Quay Park that is an urban extension of the Tähtitorninvuori Park. It will be a vibrant place for exhibitions, play and art in an environment that connects the elements of Finnish nature, trees and the seashore, to the historical cultural environment. Storm-water can be harvested and managed in the green cracks and islands before it is distributed cleaner to the sea. The surroundings of the museum enhance the different historical layers and identity of the area with different materials. Water will be used as an important element, with the reflecting, fogging and spraying playful water mirror next to the museum. A large square between the museum and the Old Market Hall offers possibilities for different type of events on the square or on the pool. The square and the pool are connected with wide and low wooden stairs that creates a terraced space for seating and hanging out. This is the place that connects the visitor to the old historical surroundings and the new urban development. Wooden elements that remind of shoreline cliffs are placed in the shoreline for people to hangout and enjoy the view of Helsinki or watch the activities around the marketplace.

Legend to Plan

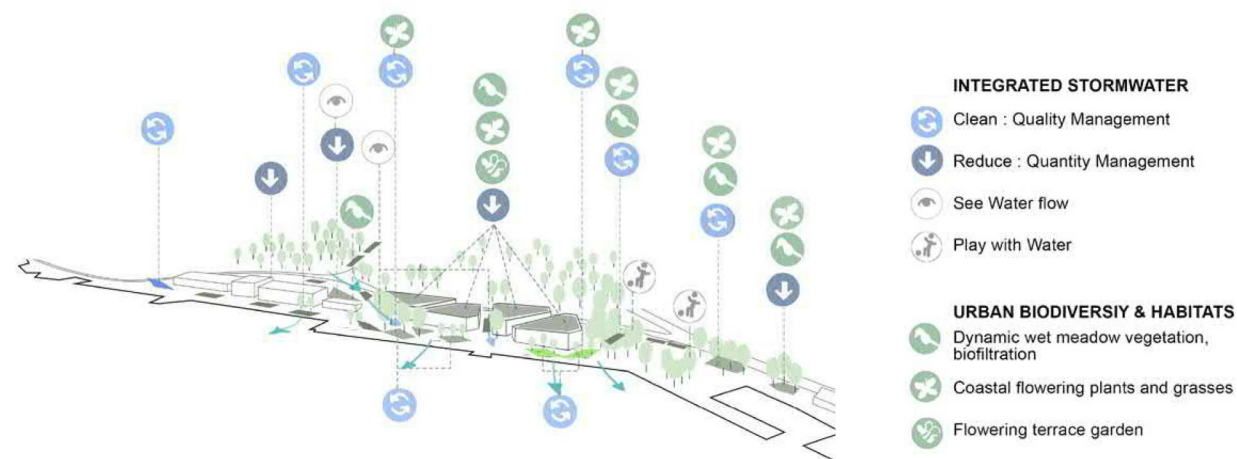
1. Kolera – allas
2. Wooden deck
3. Vironallas
4. Wooden deck
5. Markethall square
6. Event square
7. Museum competition site
8. Museum park
9. Old quay
10. New quay
11. Tähtitorninvuori park
12. Central Plaza
13. Activity square
14. Activity Path
15. Connection from park
16. The Olympic Square
17. Armi Ratia -urban botanical park
18. Botanical path

1.3 Landscape

Urban concept



PUBLIC SPACES WITH DIFFERENT FUNCTIONS ARE CREATED ALONG THE QUAY PATH



BIODIVERSITY AND WATER MANAGEMENT



COMMON GROUND

Today a difference in level creates a barrier between Laivasillan-katu and the quay. A new podium connects the upper and lower level and allows for pedestrians to move freely between the two.

EXTENDED PARKS

Greenery from the adjacent parks extends into the quay and on the square of the Olympia terminal. These new green connections reinforce the relationship between the parks and the quay area.

CONNECTED

Several connections are created between the quay, squares, parks and the city.

Landforms and vegetation

The landscape is inspired by the cracking granite bedrock in the shoreline of Helsinki. From the existing parks the tree canopies and abundant vegetation flows towards the sea where it transforms and meets the maritime vegetation. The greenery and storm-water can be seen in the urban cracks throughout the site.

Helsinki shoreline identity and the sea can be experienced in various ways: long vistas to the sea, touching the water and relaxing next to the water. From the seaside the silhouette of Tähtitorninvuori rises above the green roofs of the new development. The physical and visual connections from the surrounding parks, Tähtitorninvuori and Armi Ratia Park, are created and strengthened.

The new layer of urban nature includes different types of meadows and trees that improve micro-climate and creates habitats and shelter for different species. By creating new habitats with specific vegetation and decaying trees the new development improves the living conditions of endangered local species such as aphid *Lipaphis alliariae* and moths *Catoptria fulgidella* and *Depressaria chaerophylli*. The rooftop terraces invite birds, insects such as bees to stay and are part of the buildings nutrition and food cycle by using compost from building and producing honey, herbs and vegetables for the restaurants and employees.

The new green elements are part of areas storm-water management system. The storm-water will be guided into the vegetated urban cracks and used as a resource for recreation and urban play.

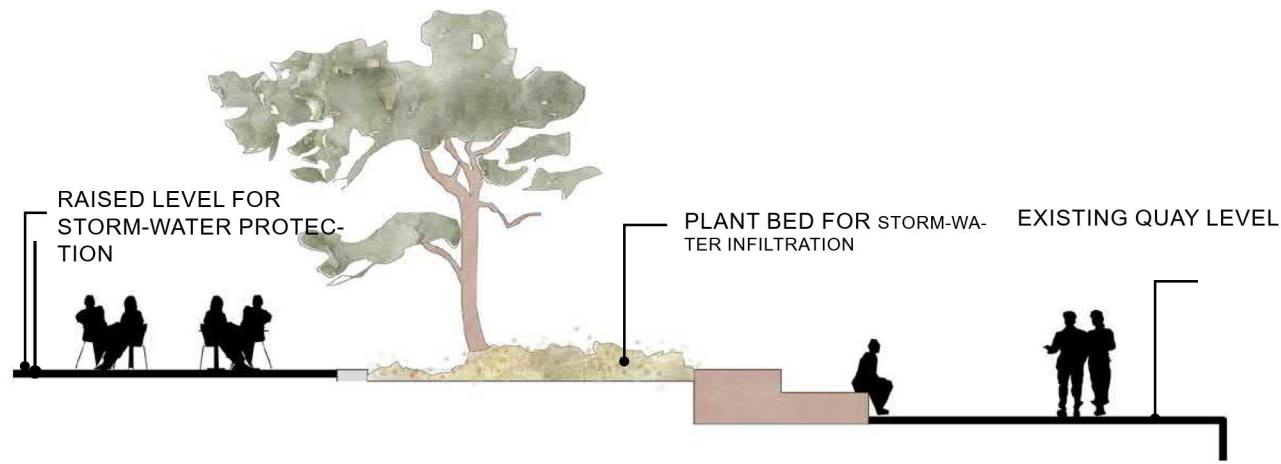
The new city spaces and the blue and green elements enables dynamic and transformative spaces that offer memorable experiences for multiple user groups throughout the year. The reformed harbour brings together nature, people and art.

Waterfront

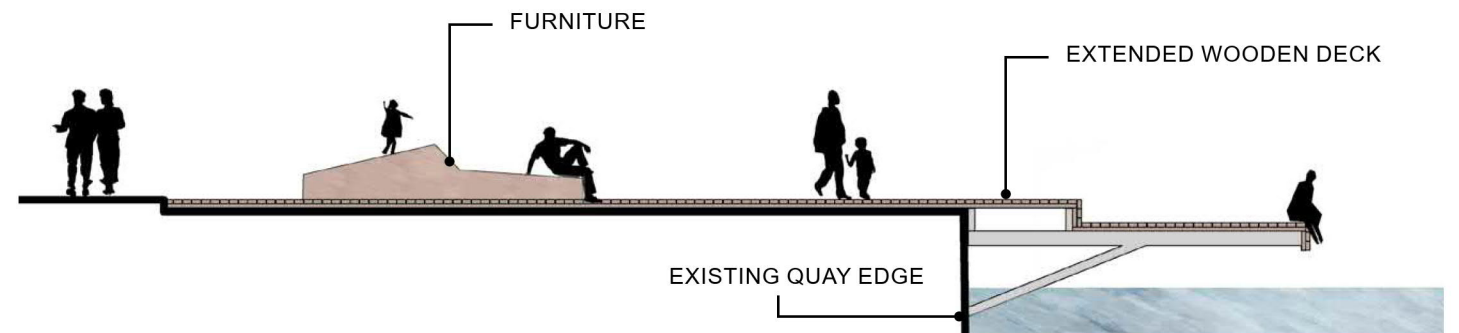
The Waterfront walk connects various functions along the shoreline, partly in two levels. In the north the Quay Park continues with wooden terraced stairs and area for terraces. A large wooden pier acts as a node point for several paths and activities. The waterfront walk continues through The Activity path and continues as an Activity Path in front of the Olympia Terminal and new Museum. The rough harbour character is emphasized with reused materials such as bricks and wood along the activity path. In the Activity Plaza it is possible to skate, parkour, kickboard and play or just sit in the terraced grading and watch the harbour activities. The old quay is preserved in the shoreline throughout the area.

1.3 Landscape

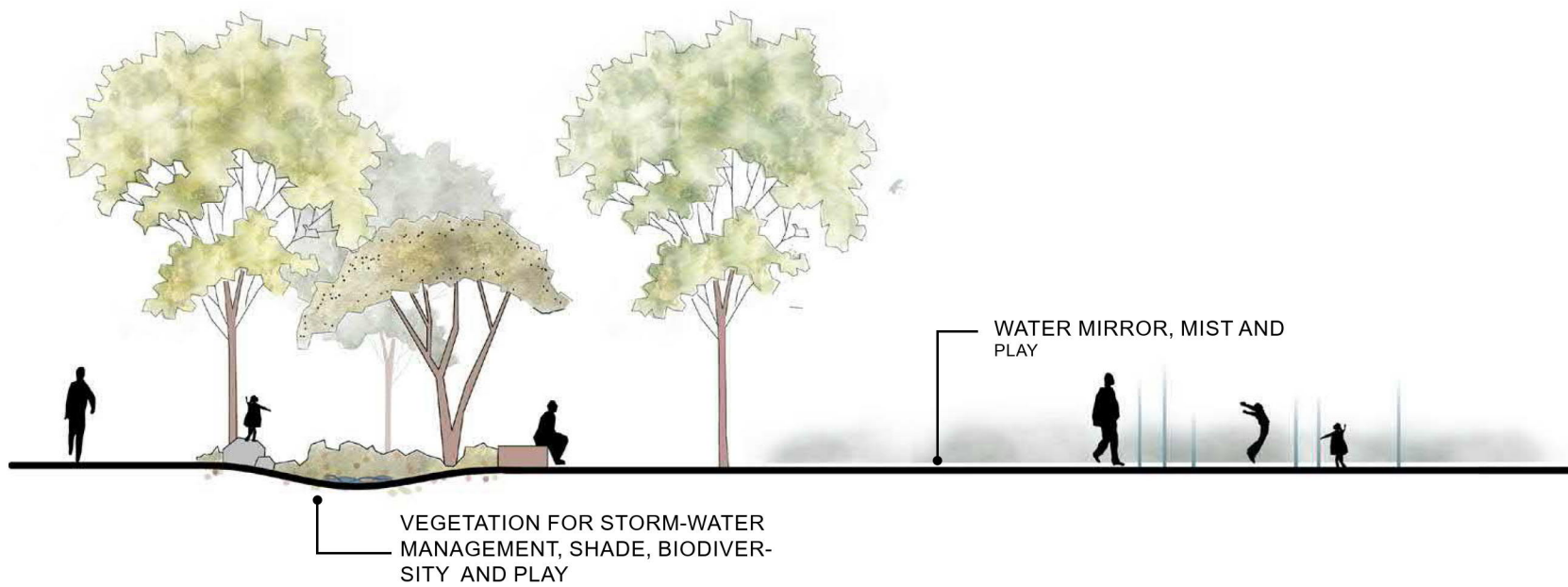
Urban concept



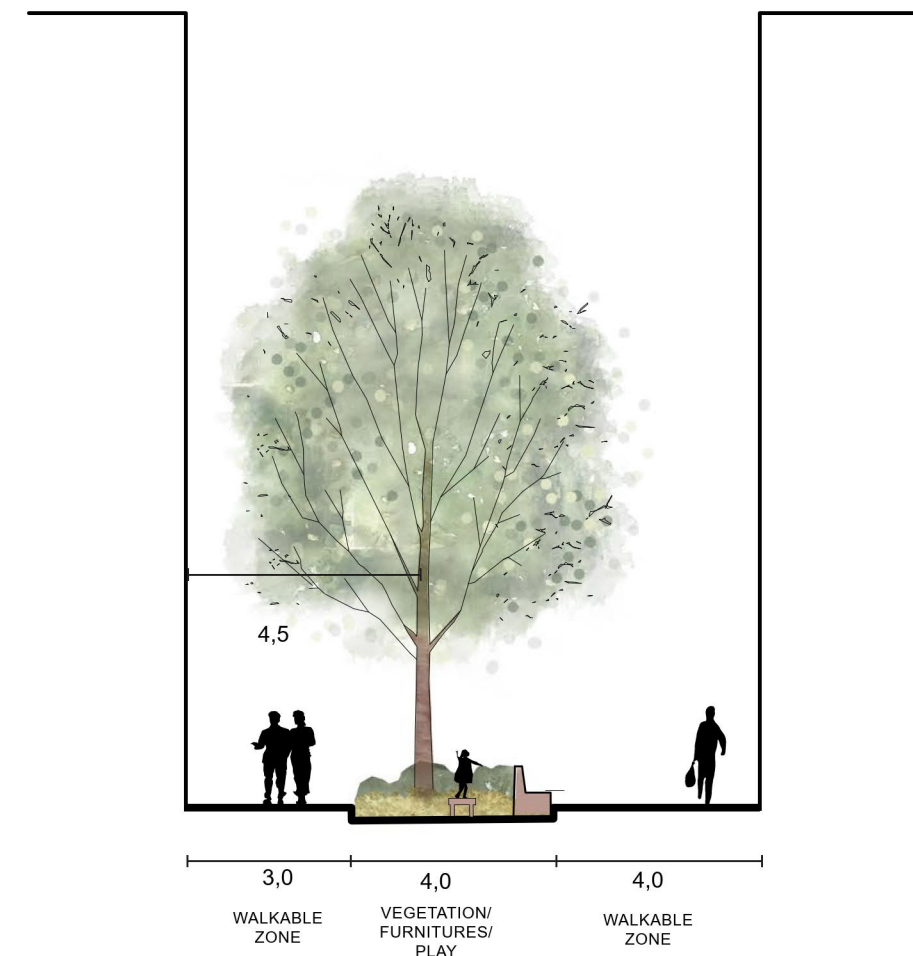
QUAY IN FRONT OF NEW BUILDINGS



DECK AT CENTRAL PLAZA



MUSEUM SQUARE



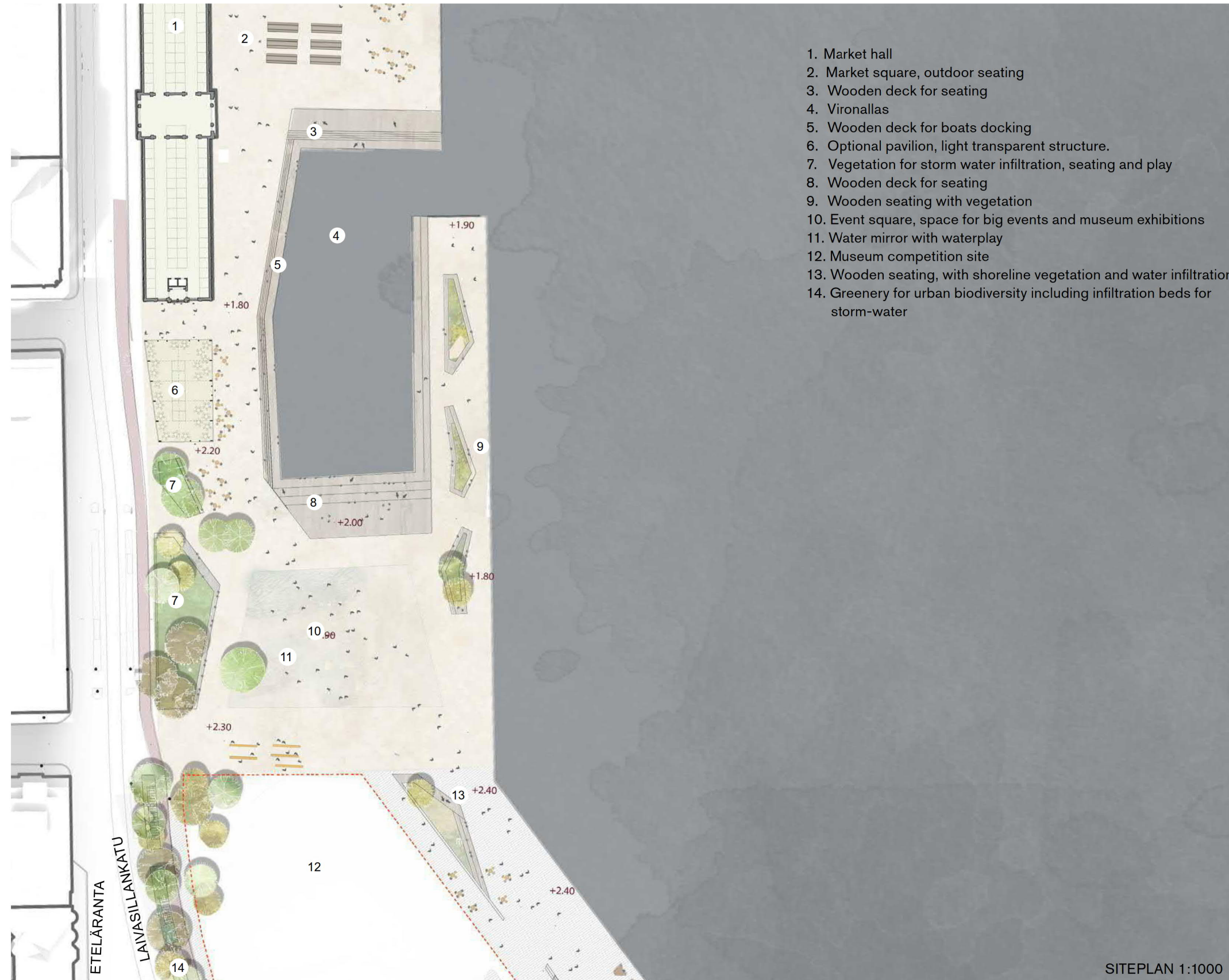
STREET SECTION



VIEW FROM THE CENTRAL PLAZA

1.3 Landscape

Urban concept



Old Market Hall and cultural environment

The significant cultural environment is treated with respect. In the immediate surroundings of the Old Market Hall there are only minor changes. The ground material will be change from asphalt to the same granite stones as the Kauppatori square. To bring people closer to the water a wooden deck is docked on to the existing last step of the quay in the both pools. In the north pool the wooden deck creates a possibility for boats to dock and people to hangout. The wood deck in Vironallas connects the shoreline for pedestrians and gives possibility to swim in the pool without disturbance of boats. A larger wood deck is created in the south part of the pool to give people the possibility to sit in the sun close to the water. The Old Market Hall will remain in its' original use and the outdoor areas in front will strengthen the concept. Lyypekinlaituri will be reserved as well for light and temporary structures.



VIEW FROM LYYPEKINLAITURI

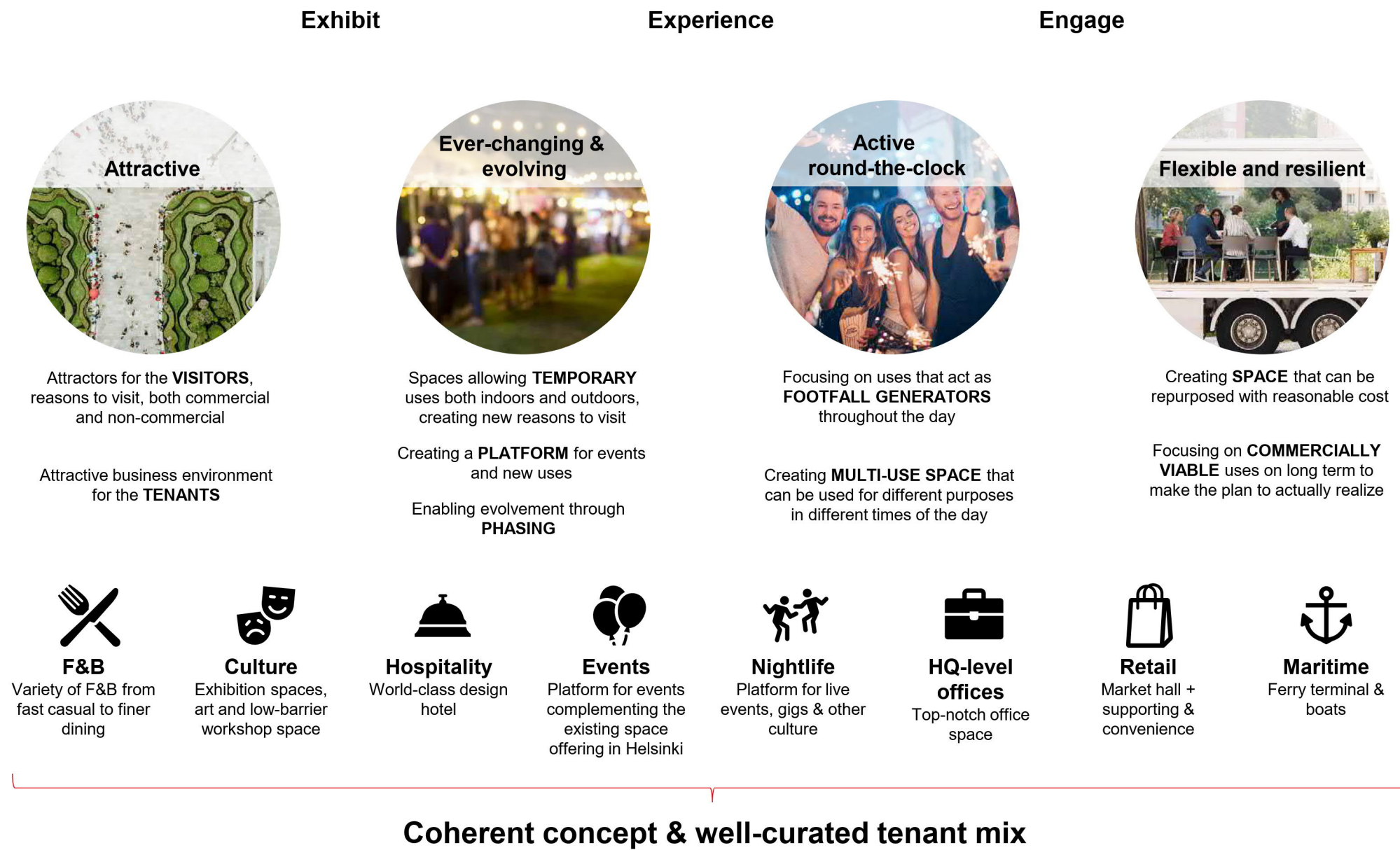


VIEW FROM LYYPEKINLAITURI WITH MUSEUM VOLUME



2 . Functional planning of buildings

Futureproof hybrid destination where culture and business meet



2.1 Commercial concept

Functional planning of buildings

The commercial concept of is built on four key pillars that create a future-proof hybrid destination where culture and business can flourish hand in hand, supporting each other.



The area will become a destination for visitors. The planned commercial and non-commercial uses will have a high visitors-attracting capacity per built square meter, such as F&B and culture. The uses such as working and hospitality also create reasons for people to dwell a long time in the area.

Makasiiniranta area serves a variety of user groups. The reasons to visit the area are varied: the area is visited for leisure, tourism, business and work. The services in the area are diverse and bring added value to all users. The versatile and interesting urban environment, in turn, attracts users to navigate and use the area in a variety of ways. Flexible use of premises and the environment together with the daily and annual rhythm of the area will make locals and visitors alike visit Makasiiniranta again and again.

Tenants, both commercial and non-commercial will play a key role in forming the image of the Makasiiniranta. The area needs to be attractive for the tenants in order to get the best possible activities in the scheme. The key tenant attractors include variety in rent levels, great servicing facilities and most importantly sustainable business opportunities. The rental price point of the area is wide from super-prime HQ space all the way to affordable, more rough spaces in existing buildings and structures on the Southern side of the area for music venues, event spaces and creative workshops.

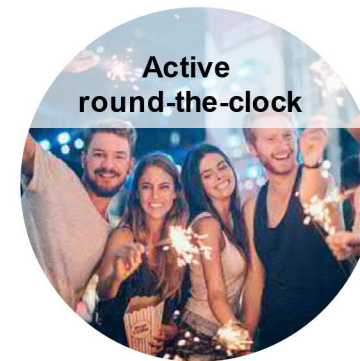


The core of the identity of the area is to be dynamic and evolve over time. 20% of the ground-level operations will be with short leases to allow tenant turn-around and new reasons for citizens of Helsinki as well as visitors of all age groups to spend time in the area. There will also be dedicated pop-up F&B units with full kitchen infrastructure to be leased for new chef-driven restaurants for trying out new concepts.

Events will play a key role in the activation of the area. Proper event infrastructure allows a range of indoor and outdoor events from small grass-root events all the way to larger culture and market events.

The area will evolve throughout the initial set-up period but also after 2030. Phasing allows some of the ideas to be tested in the first phase and developed for the later ones. Phasing also ensures sufficient time for the market to absorb the leasable spaces.

The Southern area's event and commercial space will be at the first stage developed into a rough, temporary space for operators such as event organizers for a test platform. When a winning concept is found, the area will be developed further.



The planned uses will enable a true 24-h economy in the area. Workplaces will activate the area during the day while culture and nightlife will bring people to the area in the evening and nighttime. Hospitality and F&B will further spread the footfall throughout the day.

The event spaces and public areas as well as cultural spaces are multi-purpose spaces with the ability to dedicate them for other uses than the intended core use in less busy times.

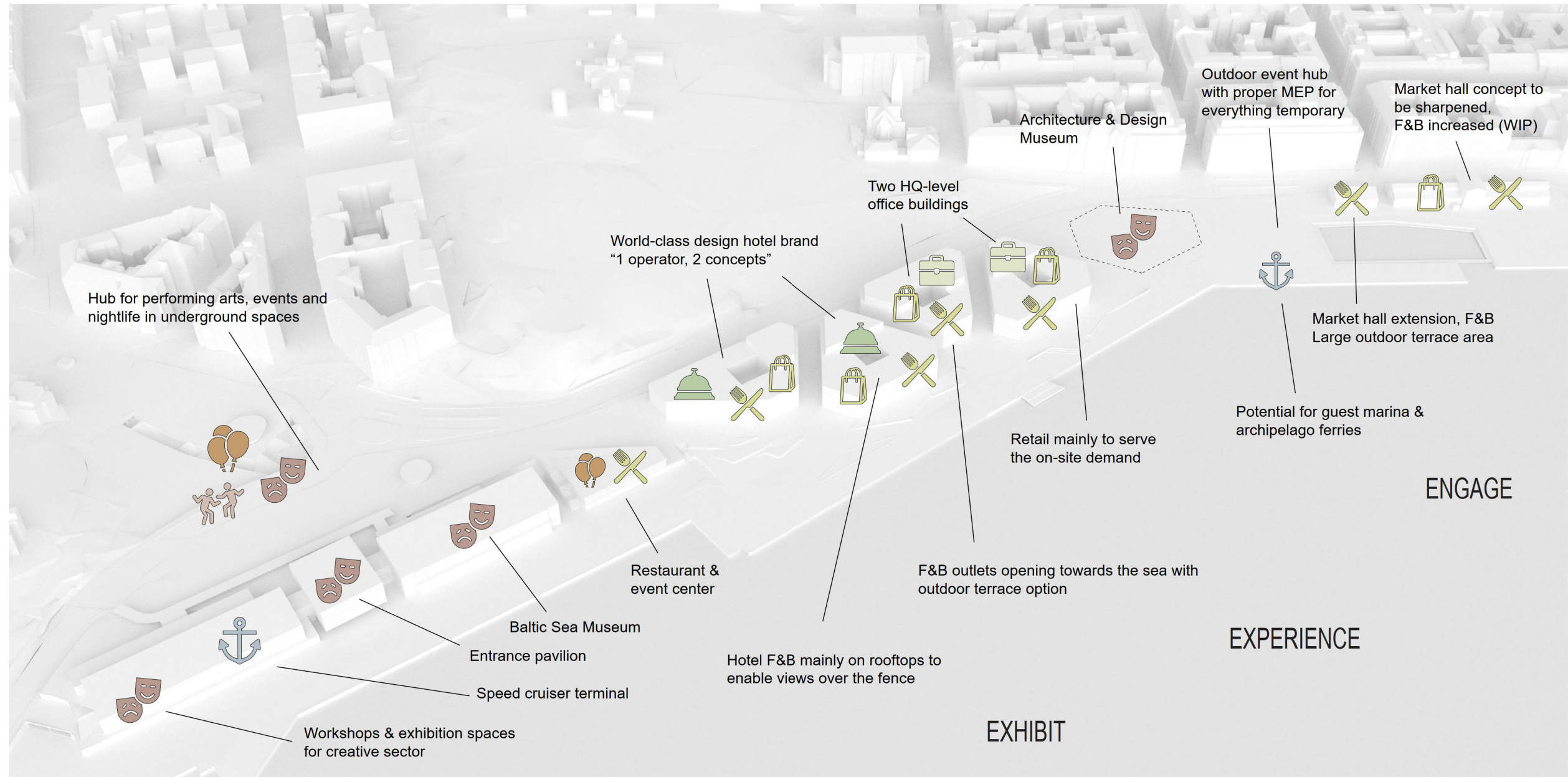


The flexibility of spaces is taken into consideration in the planning. Both, new and existing structures can be easily changed into other uses with minimal cost and carbon footprint as the market demand changes over time. The buildings in the central area are planned in a manner that they can be used for either office or hospitality use by the size and shape.

Vacant spaces and economically struggling tenants will not attract people nor activate the area. Commercial viability for different types of operators including non-commercial uses is made possible by having a range of different quality spaces with different price points. Some interviews have been conducted to verify tenant demand for the proposed uses ensuring that the commercial plan is realistic.

2.1 Commercial concept

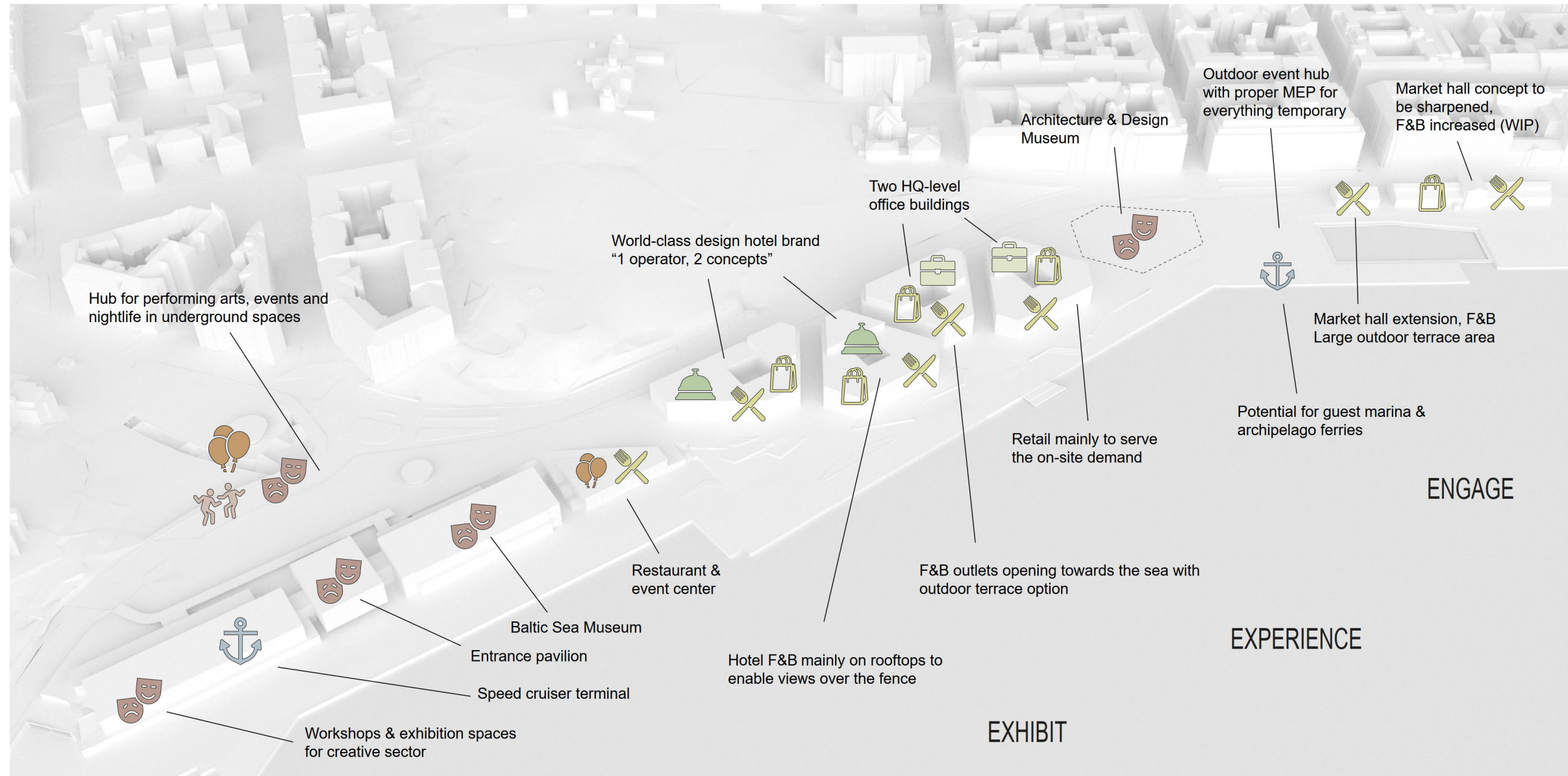
Functional planning of buildings



F&B Variety of F&B from fast casual to finer dining	Culture Exhibition spaces, art and low-barrier workshop space	Hospitality World-class design hotel	Events Platform for events complementing the existing space offering in Helsinki	Nightlife Platform for live events, gigs & other culture	HQ-level offices Top-notch office space	Retail Market hall + supporting & convenience	Maritime Ferry terminal & boats
Scattered / clustered	Southern end + D&A	Middle section	Two main clusters	Southern end	Middle section	Clustered	Clustered
~2,500 sqm + terraces + temporary	~6,000-8,000 sqm excl. D&A	~15,000 sqm	~6000, sqm + outdoor		~15,000 sqm	~1,000 sqm excl. market hall	~2,500 sqm + outdoor

2.1 Commercial concept

Functional planning of buildings



Culture section

Satamatalo is designed to house a new museum/exhibition space. The Olympic terminal building will have ateliers and designer workshops on the lower level and the upper level will respect its maritime roots as a high-speed vessel terminal.

The underground space is recommended to be developed into a large event space, especially for nightlife and live music. The event space category of approx. 3,000 sqm is currently under supplied in Helsinki. The underground spaces can house other uses such as rougher atelier/workshop space. The underground spaces will be tested first in event use and when the concept is proven to function, a more permanent solution will be built.

F&B, hospitality & working section

The key F&B square will be located on the sea side of the office and hotel buildings. The open indoor space offers a convenient route in the colder season through retail and F&B operators. In the summer season, the F&B space will double with outdoor seating creating a buzz in the whole area.

The hotel buildings will have rooftop restaurants with great views and sunlight until late evening. The F&B offering will range from fast-casual all the way to finer dining in this area.

The office buildings will be designed for iconic headquarters with superior locations. The hotel buildings will house two hotel brands, one being a unique design hotel and the other one more traditional up-scale hotel.

Architecture & Design Museum

Competition 2023

Market hall section

The commercial entrance into the area from the city centre side. The market hall is to be developed commercially to be more attractive in today's world. Market stalls will in the future be still the foundation of the market hall, but there should be a shift towards F&B. The F&B offering will focus on fast-casual on this end of the project area. The terraces and access from the market hall to the terraces are to be improved.

The market hall can be extended with an independent temporary pavilion in order to create more F&B space meeting today's requirements.

On the southern side of this section will be located an outdoor event hub with infrastructure for performing arts as well as temporary food stalls and trucks.

2.1 Commercial concept

Functional planning of buildings

Makasiiniranta provides an ideal location for creative industries cluster and supporting commercial activities. Together with the upcoming A&D museum, they form an attractive new design district, a platform which enables different ideas to collide. Makasiiniranta will be a future-proof hybrid destination where culture and business meet.

A strong brand and distinctive identity will add value in the form of attractiveness, user experience and economic viability of the area. Makasiiniranta area positions itself on the city, national and global level as a hot spot of design and creativeness. The business concept itself consists of three key value propositions that are the common drivers of different functions located in the area

- Exhibit: showcasing the Finnish and Nordic design
- Experience: providing unique experiences for the users and visitors
- Engage: enabling co-creation and collaboration in physical and digital spaces

The commercial concept is built on four key pillars:

Attractive

The area will become a destination for visitors. The planned commercial and non-commercial uses will have a high visitors-attracting capacity per built square meter, such as F&B and culture. The uses such as working and hospitality also create reasons for people to dwell a long time in the area

Tenants, both commercial and non-commercial will play a key role in forming the image of the Makasiiniranta. The area needs to be attractive for the tenants in order to get the best possible activities in the scheme. The key tenant attractors include variety in rent levels, great servicing facilities and most importantly sustainable business opportunities. The rental price point of the area is wide from super-prime HQ space all the way to affordable, more rough spaces in existing buildings and structures on the Southern side of the area for music venues, event spaces and creative workshops.

Ever-changing & evolving

The core of the identity of the area is to be dynamic and evolve over time. 20% of the ground-level operations will be with short leases to allow tenant turn-around and new reasons for citizens of Helsinki as well as visitors of all age groups to spend time in the area. There will also be dedicated pop-up F&B units with full kitchen infrastructure to be leased for new chef-driven restaurants for trying out new concepts.

Events will play a key role in the activation of the area. Proper event infrastructure allows a range of indoor and outdoor events from small grass-root events all the way to larger culture and market events.

The area will evolve throughout the initial set-up period but also after 2030. Phasing allows some of the ideas to be tested in the first phase and developed for the later ones. Phasing also ensures sufficient time for the market to absorb the leasable spaces.

The Southern area's event and commercial space will be at the first stage developed into a rough, temporary space for operators such as event organizers for a test platform. When a winning concept is found, the area will be developed further.

Active round-the-clock

The planned uses will enable a true 24-h economy in the area. Workplaces will activate the area during the day while culture and nightlife will bring people to the area in the evening and nighttime. Hospitality and F&B will further spread the footfall throughout the day.

The event spaces and public areas as well as cultural spaces are multi-purpose spaces with the ability to dedicate them for other uses than the intended core use in less busy times.

Flexible and resilient

The flexibility of spaces is taken into consideration in the planning. Both, new and existing structures can be easily changed into other uses with minimal cost and carbon footprint as the market demand changes over time. The buildings in the central area are planned in a manner that they can be used for either office or hospitality use by the size and shape.

Commercial viability for different types of operators including non-commercial uses is made possible by having a range of different quality spaces with different price points. Some interviews have been conducted to verify tenant demand for the proposed uses ensuring that the commercial plan is realistic.

Footfall projections

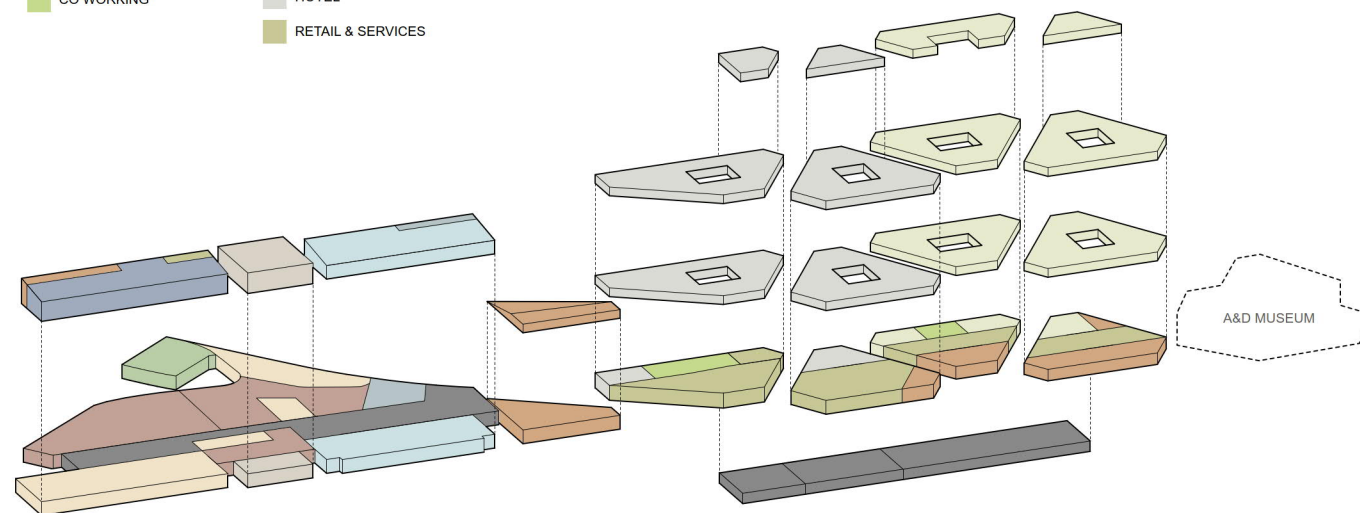
Approx. 4 million

visitors / a, excluding passers-by and outdoor hangers. Passers-by and outdoor hangers are expected to add at least 1 million in footfall projections.

2.2 Functions

Functional planning of buildings

 FOOD & BEVERAGE	 STUDIO / WORKSHOP
 BALTIC SEA CENTRE	 WINTER GARDEN
 ENTRANCE HALL	 SERVICE / STORAGE
 EXHIBITION / EVENT	 BICYCLE PARKING
 SPEED CRUISER TERMINAL	 OFFICE
 CO WORKING	 HOTEL
	 RETAIL & SERVICES



The ground level of the area will be reserved for public and commercial function throughout the area. Museums in both ends of the competition area serve as attracting nodes.

Architecture and Design - museum

Architecture and design museum in the north connects to the event and entrance square in the north and an extension of Tähtitorninvuori-park in the south. The museum maintenance traffic is arranged with a service tunnel from the south.

The four new buildings

The ground levels will be reserved for public functions such as commercial spaces, exhibitions, galleries, restaurants and cafés as well as working spaces. The basements will be connected as one, minimized space containing logistics and storages, technical spaces as well as bicycle parking. The 2nd – 3rd floors are flexible spaces suitable for different types of working and hotel use. The prime location has the potential to attract a dynamic mixture of Nordic headquarters, smaller businesses and creative communities. The roof floors are withdrawn from the façade line creating terraces for various uses. In addition to the terraces there will be multifunctional green roofs and solar panels.

In our first scenario, there will be two different brand hotel is the two southern most buildings and the two northern most will be office buildings. The flexibility of the structure allow other combinations as well in case the market demand changes.

Terrace building

The two-level restaurant building can be accessed from both Laivasillankatu and quay levels. It acts as a connecting element between the quay and the new Olympic park in front of the Porthouse. It is placed in the sea front in line with the terminals as low mass in order not to interrupt important views. The roof of the building is accessible to the public creating another unique place along the seashore route.

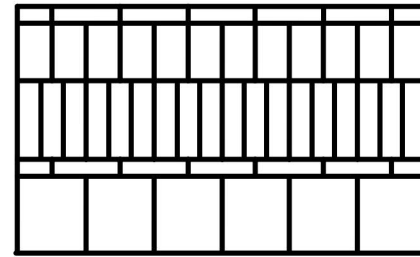
The high-speed vessel terminal

The reservation for the new terminal is located in the existing Olympic terminal. This is a natural continuation for the valuable Olympic building.

The Olympia terminal and the Port House

For the adaptive reuse we propose the Porthouse to be transformed into a multi-purpose exhibition and venue center for the Baltic see region. The other alternative, which was presented in our first phase entry, is to place the Architecture and Design museum here.

The exhibition buildings will be connected to the city from all directions. The main entry is placed in the middle of the Olympia terminal and the Porthouse in a new wood-glass building which can be accessed from both levels. We propose to use recycled building parts and materials from the demolished M4 terminal such as glue-lam beams and brick in the construction.



3. Architecture

3.1 Floor plans

Architecture



PLAN 1:1000 – GROUND LEVEL

Building 1. +3,4m

1. F&B/ Mixed use. Casual dining
2. Retail/ Mixed use. Smaller units
3. Service pods
4. Path through building
5. Office entrance, lobby

Building 2. +3,4m-4,5m (varies)

1. F&B/ Mixed use. Fine dining
2. Retail/ Mixed use. Smaller units
3. Service pods
4. Path through building
5. Office entrance, lobby

Building 3. +3,4m-4,5m (varies)

1. Retail/ Mixed use.
Pop up, concept stores.
2. F&B. Smaller units
3. Service pods
4. Path through building
5. Hotel, lobby

Building 4. +4,5-6,0m (varies)

1. Retail/ Mixed use. Eco grocery store
2. F&B. Smaller units
3. Service pods
4. Path through building
5. Hotel, main lobby
6. Secondary lobby
7. Hotel wellness/ gym

Building 5. +10,4m

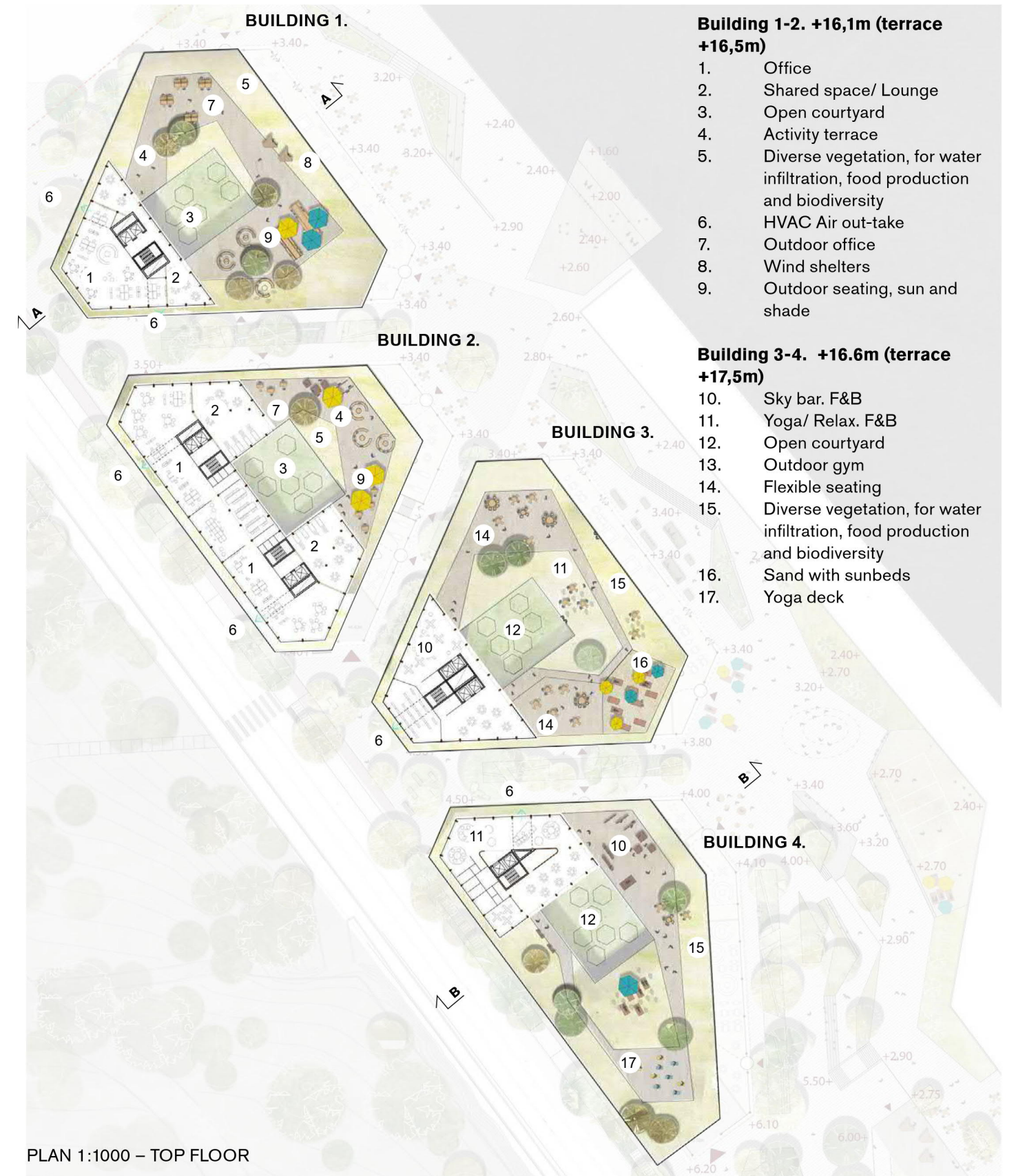
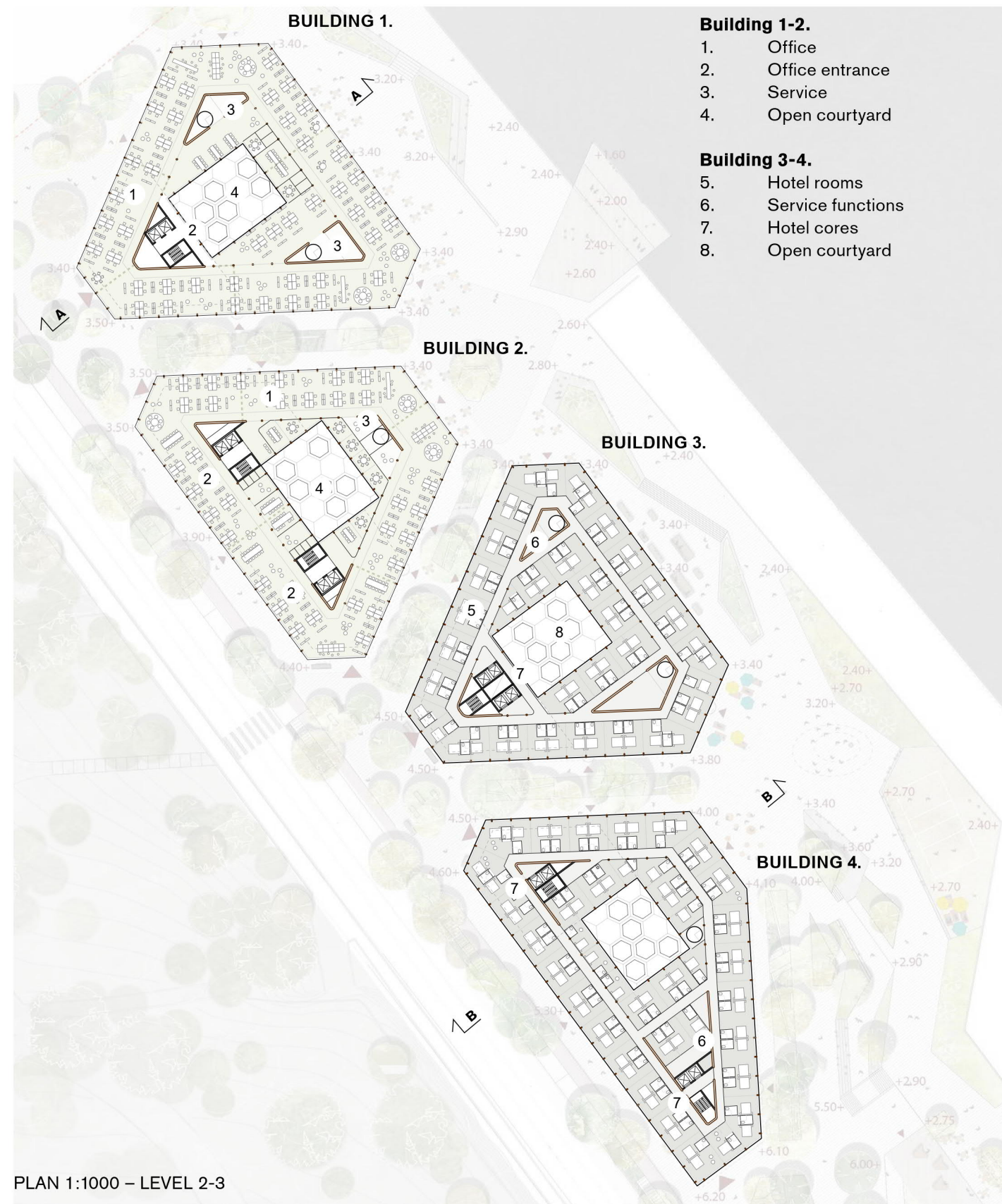
8. Terrace "look out" platform
Accessible through ramps and stairs

Landscape

9. Bicycle parking
10. Drop off zones
11. Open space for seating
12. Wooden seating with shoreline vegetation
13. Wooden deck for seating
14. Lush greenery for water infiltration, seating and play
15. Flexible outdoor seating
16. Lounge area
17. Sunken meadow for storm-water infiltration
18. Flexible space for sports
19. Informal seating
20. Area for parkour
21. Green terrace for sports and seating
22. Sand for beach volleyball and other sand games
23. Wind shelters

3.1 Floor plans

Architecture





VIEW FROM LAIVASILLANKATU TOWARDS USPENSKI CATHEDRAL

3.1 Floor plans

Architecture



PLAN 1:1000 – ENTRY LEVEL

New Terminal. +6,0m (varies)

1. Entrance level 2
2. Restaurant

Port House. +8,8m

3. Baltic Sea Museum
4. Bicycles

Entrance Building. +8,8m

5. Entrance lobby

Olympia Terminal. +8,8m

6. Terminal for ferry traffic
7. Shop
8. Restaurant

Landscape

9. Bicycle parking
10. Rain garden with seating and play
11. Flexible outdoor seating
12. Sunken meadow, for water infiltration
13. Exhibition canopy
14. Small pavilions for pop up stores
15. Big tables with hanging lights over
16. Wooden decks for relaxing
17. Meadow
18. Wooden bench along meadow
19. Glass pavilion to underground
20. Wooden seating
21. Meadow with different species and wood seating
22. Flexible square for bus parking and skating
23. Swings
24. Outdoor room for art
25. Square for urban botanical garden with seating and information
26. Terraced seating and stairs
27. Accessible path
28. Diverse and lush planting
29. Sunken botanical garden with wooden path and seating

Olympic Square

The Olympic Square is located next to the Laivasillankatu in front of the old Olympia Terminal Buildings and the Baltic sea museum's new entrance. The square has many roles in addition to act as an entrance square. It connects the Tähtitorninvuori Park and Armi Ratia Park with greenery. The tree canopies offer also shelter and relaxing seating areas for individuals and groups. The Olympic square is connected with the underground spaces to the shaft with valuable existing rough features and a new wide wooden ramp that connects the Armi Ratia Parks both sides and the Kaivopuisto Park area. The Olympic Square as well as the shaft area can be used for several purposes such as outdoor exhibitions and events.

3.1 Floor plans

Architecture



- Building 5 +2,4m**
1. Entrance and restaurant
- Port House. +2,4m**
2. Baltic Sea Museum
- Underground areas. +2,4m**
3. Bicycles
4. Art workshops
5. Winter garden
6. Event space
7. Passage
8. Logistics/ service/ storage
9. Loading
- Entrance Building. +2,4m**
10. Lobby
- Olympia terminal. +2,4m**
11. Designer and Artists Workshops/ galleries.
12. Café
13. Sunken meadow, for water infiltration
14. Small pavilions for pop up stores
15. Big tables with hanging lights over
16. Wooden decks for relaxing
17. Outdoor room for art
18. Swings
19. Square for urban botanical garden with seating and information
20. Sunken botanical garden with wooden path and seating



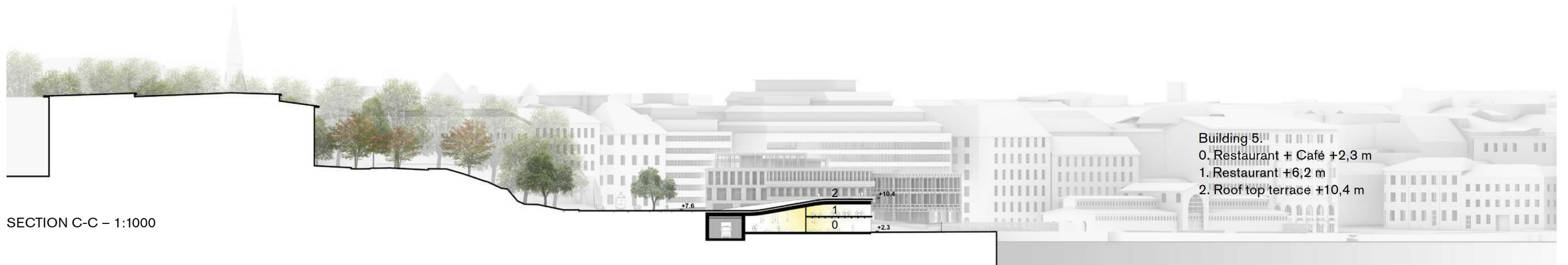
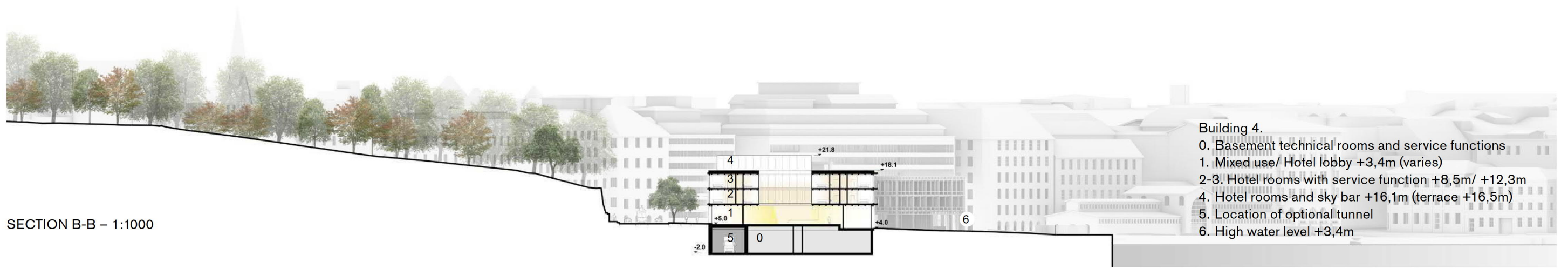
VIEW TOWARDS ARMI RATIA PARK. SHOWING WINTER GARDEN AND TRANSFORMATION OF EXISTING SHAFT



BALTIC SEA CENTRE WITHIN THE PORT HOUSE M3

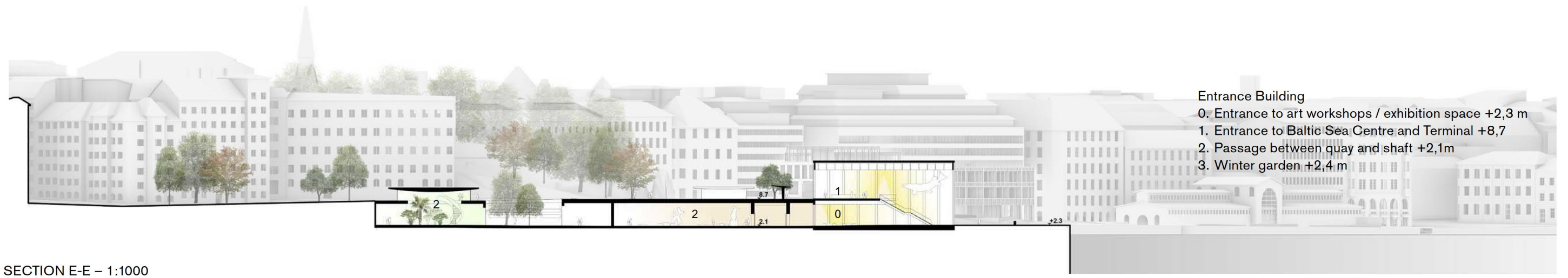
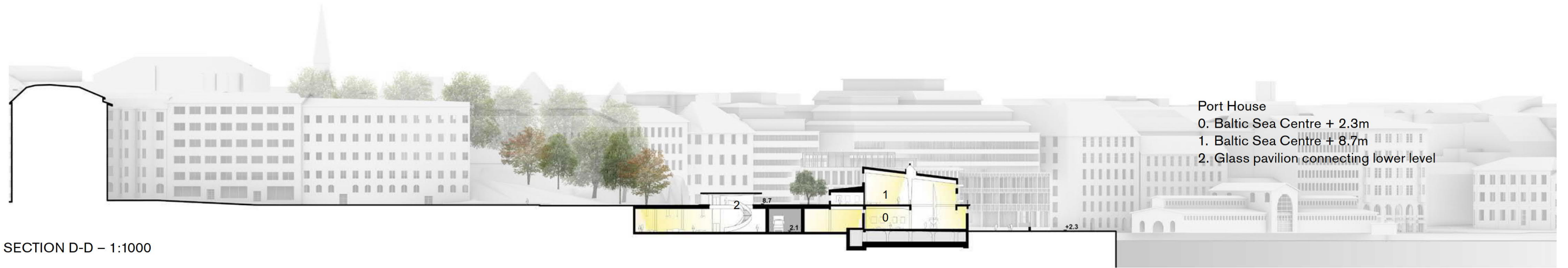
3.2 Sections

Architecture



3.2 Sections

Architecture

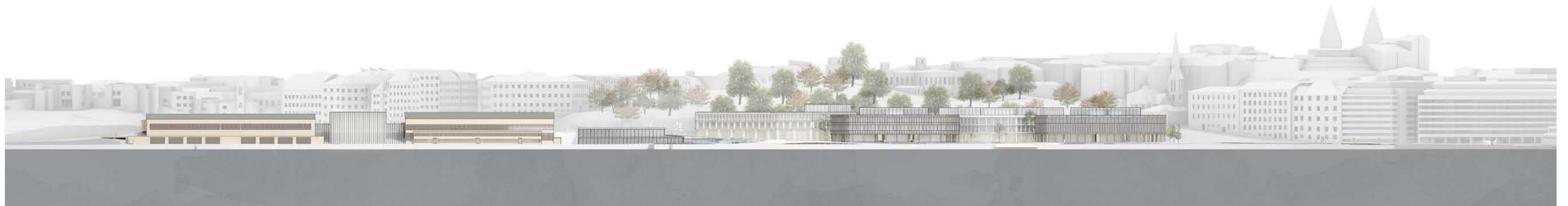


3.3 Elevations

Architecture



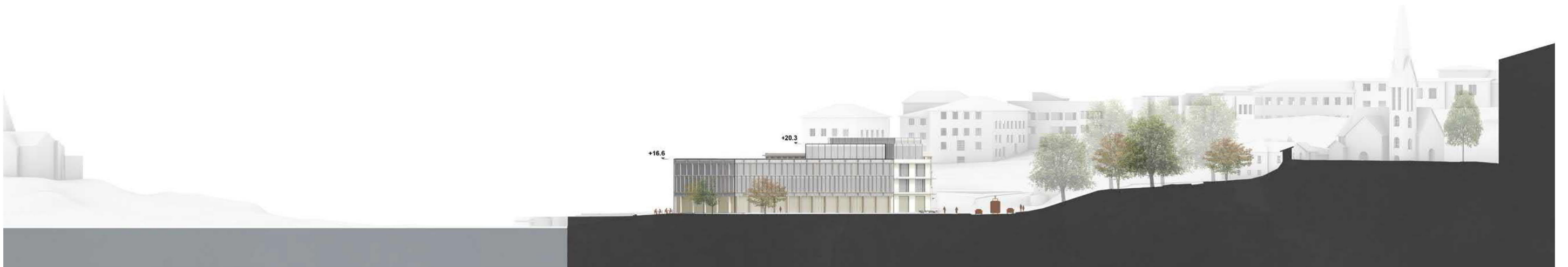
ELEVATION TOWARDS LAIVASILLANKATU – 1:2000



ELEVATION TOWARDS THE SEA – 1:2000



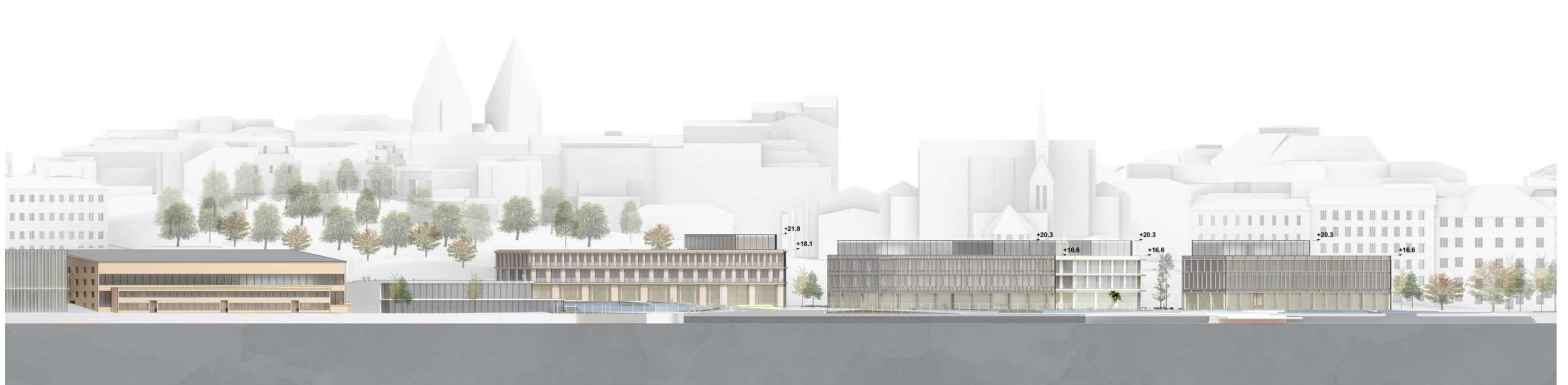
VIEW FROM THE SEA



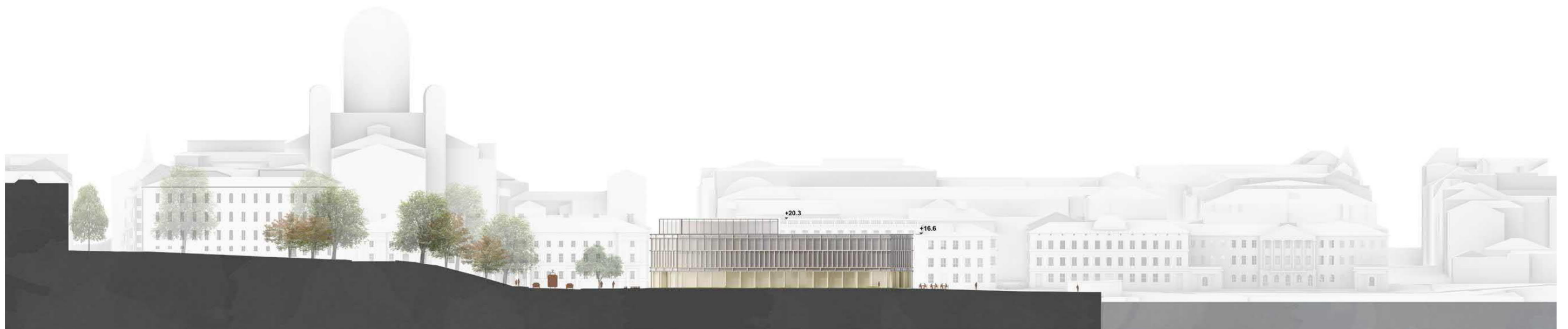
ELEVATION TOWARDS MUSEUM – 1:1000

3.3 Elevations

Architecture



ELEVATION TOWARDS KATAJANOKKA – 1:1000



ELEVATION THROUGH BERNHARDINKATU – 1:1000



VIEW FROM KAUPPATORI



VIEW FROM KAUPPATORI WITH 9000M2 ARCHITECTURE AND DESIGN MUSEUM VOLUME

FAÇADE CONCEPT

The new buildings can be recognized as clearly distinguishable new architecture. Light post and beam wood structure allows flexibility of use. Recycled and new ceramic tiles alongside differing nuances of glass are dominant façade materials. The visible timber structure within gives the main identity for the buildings.

There is a long heritage of wood and hybrid structures on the competition site, such as the wooden warehouse in the late 19th century and the innovative steel and wood roof structures of the Old Market Hall. In addition, in the harbour buildings the dominant material is warm yellow tile. It is a natural continuation to introduce contemporary wood and hybrid construction as well as ceramic tile for the new buildings. Ceramic tile is a durable material for the harsh seashore weather conditions. The bearing frames of the new buildings are wood-concrete hybrid frames.

The ceramic tiles are customized and different in each of the new buildings. The profiled vertical tiles are glazed on the ground floor and matt in the upper floors. The rhythm, proportions and depth vary in each building. They will appear as members in the same family yet all individuals.

In addition to using low carbon building materials, we propose to use as much recycled materials as possible from the to be demolished M4 terminal.



3.4 Façades Architecture



BUILDING 1



BUILDING 2

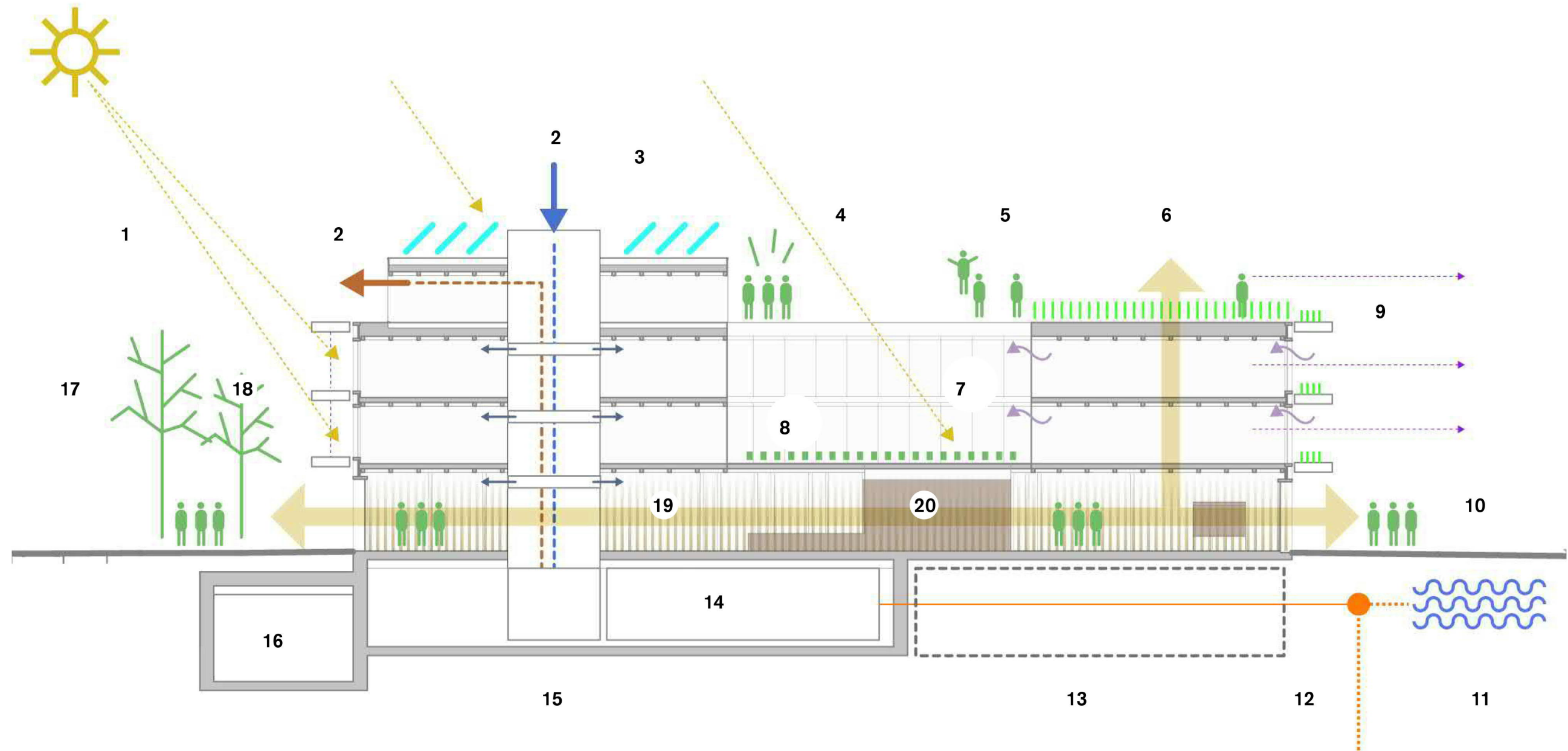


BUILDING 3



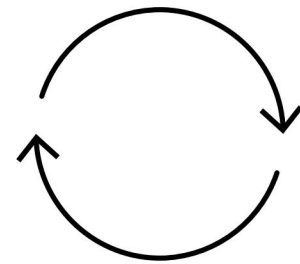
BUILDING 4

- 1. Matt ceramic tile
- 2. Glazed ceramic tile, custom profile
- 3. Glass
- 4. Etched glass



General Design Parameters

- | | | | | | |
|----|--|-----|---|-----|---|
| 1. | Solar shading (mostly on west façades) | 10. | Full access for active ground floors | 19. | Hybrid wooden construction |
| 2. | Air in- and out-take | 11. | Water cooling/ heating possibility | 20. | Reuse of existing demolished buildings |
| 3. | Solar panels | 12. | Geothermically heat exchange | 21. | Building layout made to suit flexible use over time |
| 4. | Roof tops as space for activities | 13. | Minimized basement, with optional extension | | |
| 5. | Extensive green on terraces | 14. | Centralized energy central | | |
| 6. | Easy access to roof | 15. | Strategically placed central cores | | |
| 7. | Nighttime cooling | 16. | Tunnel | | |
| 8. | Accessible courtyard with light canopies | 17. | Biodiversity | | |
| 9. | Green terrace/ balconies | 18. | Exterior façade cladding, durable ceramics | | |
| | | | | | |
| | | | | | |



4. Sustainability

4.1 Sustainability

This chapter presents our approach to sustainability with sub topics: liveability and resilience, urban biodiversity, circularity and co2 emission.

Saaret includes actions on all the aspects of strong sustainability, ecological, social & cultural, and economic. The urban structure is not just minimizing the negative impacts but is also enhancing the positive impacts by partnering with the nature: sun, wind, water and the flora & fauna.



4.2 Liveability & resilience

Sustainability

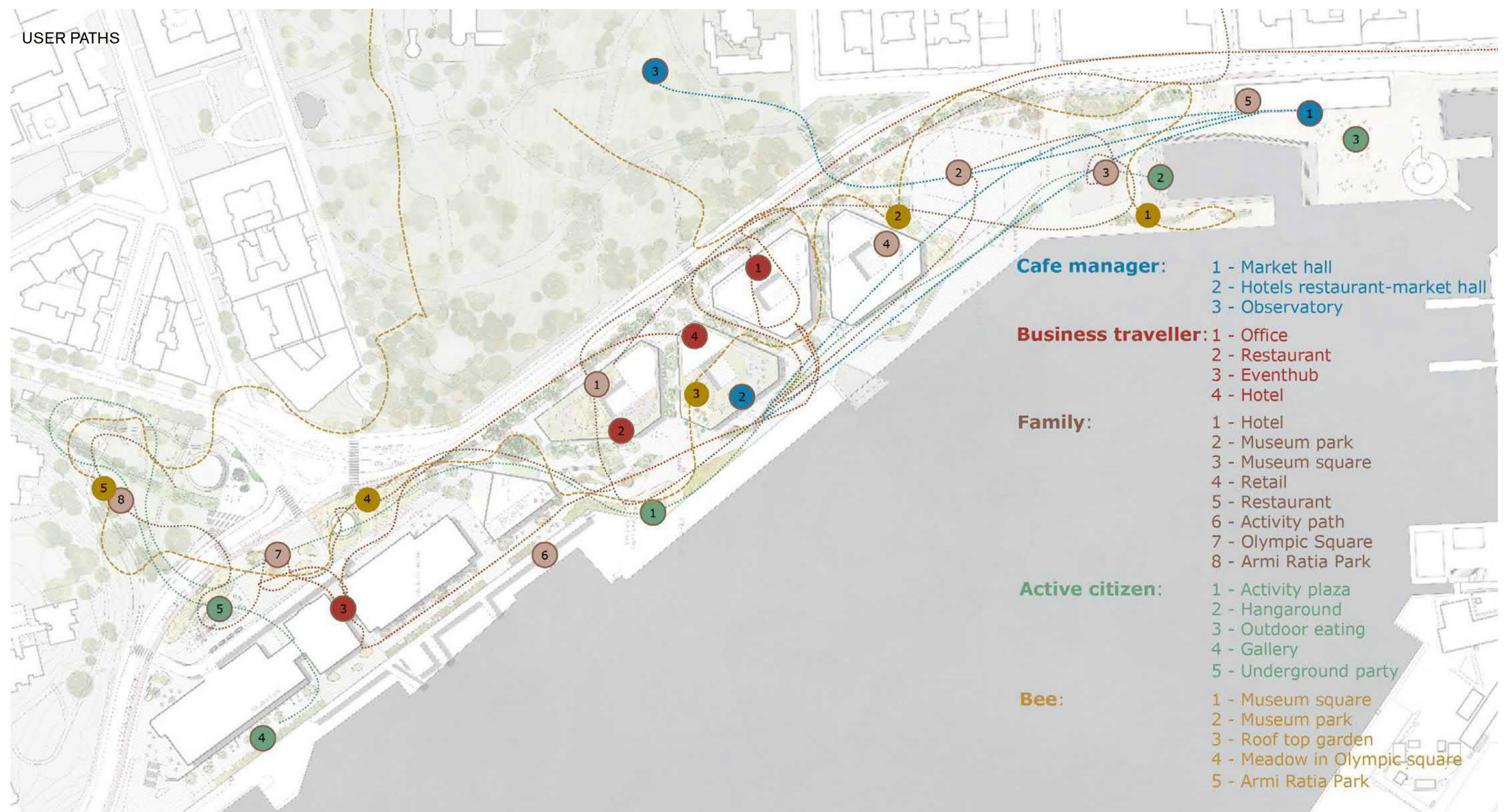
User paths and touch points

Makasiiniranta area serves a variety of user groups. The reasons to visit the area are varied: the area is visited for leisure, tourism, business and work. The services in the area are diverse and bring added value to all users. The versatile and interesting urban environment, in turn, attracts users to navigate and use the area in a variety of ways. Flexible use of premises and the environment together with the daily and annual rhythm of the area will make locals and visitors alike visit Makasiiniranta again and again.

From the perspective of social responsibility, Makasiiniranta area takes into account different needs of different user groups and uses. It provides both consumer services as well as places where one is able to enjoy the area without spending money.

Accessibility is one of the key qualities in creating an environment for all – in the proposal accessibility aspect is planned so that there are a variety of available paths for different purposes and requirements taking into account both physical as well as perceived dimensions of accessibility, including safety, feeling and enjoyment.

Some of the user groups we could regularly meet in the area are illustrated in the following graph.



4.2 Liveability & resilience

Sustainability

Some of the user groups we could regularly meet in the area:

Café entrepreneur from Töölö

An entrepreneur who has been running a café in the Old Market Hall for years and has been following the life of the Makasiiniranta area closely and with interest. As a result of the development, she has also gained new customers, e.g. visitors to museum, hotels and offices.

1. Arrives to work by van.
2. Sells signature pastries from the market hall, has also collaboration with the restaurants in the area.
3. Lunch time is the busiest time of the day when she also delivers local ingredients to restaurants in the Makasiiniranta area.
4. Often relaxes in Tähtitorninvuori park after a busy workday.

Values steady customer flow and partnerships with other businesses in the area. Regularly enjoys the area as a consumer of restaurants, exhibitions and workshops.



International business traveler

A visitor working in an international company who arrives at an event organized by the Finnish office in Makasiiniranta. Combines an extended weekend trip with a business trip.

1. Arrives in Finland by plane and uses a taxi from the airport straight to the office in Makasiiniranta.
2. Spends a working day at the office in different spaces.
3. In the evening attends the event organized in the old ferry terminal event hub.
4. Stays in the Makasiiniranta luxus hotel over the weekend.
5. Gets to know summer Helsinki.

Values flexible working spaces and good restaurants offering a variety of Nordic cuisine.



Family with children from Mikkelä

An architect couple with two children spending an autumn holiday in Helsinki. Parents are waiting for the visit to the museum and also some of the design boutiques. However, for the most parts, the trip is made on children's terms, including fun and games.

1. Family arrives by electric car, parks it in the charging area.
2. Stays at the hotel in the area.
3. Visits museum, boutiques, restaurants and enjoys the environment including the water mirror and the seascape. Spends several hours in the area including dining.
4. Children enjoy the waterplay in the water mirror and different activity's for children at the area.
5. Uses the ferry service to visit the Helsinki archipelago destinations.

Values the smooth accessibility and the ease of mobility with a stroller, e.g. Observatory, playgrounds in the area and Suomenlinna. Easy to move with the stroller.



Active young resident from Hakaniemi

A Helsinki resident who regularly visits Makasiiniranta for different purposes and seasons. Studies in the university and enjoys arts, nature and culture in all forms. Wants to participate the development of the area and the activities.

1. Arrives in the area on foot from the University campus in the city center.
2. Doing a morning yoga exercise at the Zen Park, where she feels away from the hustle and bustle of the city.
3. Studies often at the area and gets inspired.
4. Is an active placemaker, engages with the Makasiiniranta in different forms
5. Participates in various cultural events, exhibitions, workshops.
6. Late evening party in the underground event space.

Values the constantly evolving and changing actions. Enjoys the seafront and the vibrant cityscape of the area. Likes to hang around in the area for different purposes, as an active space maker as well as a space user.

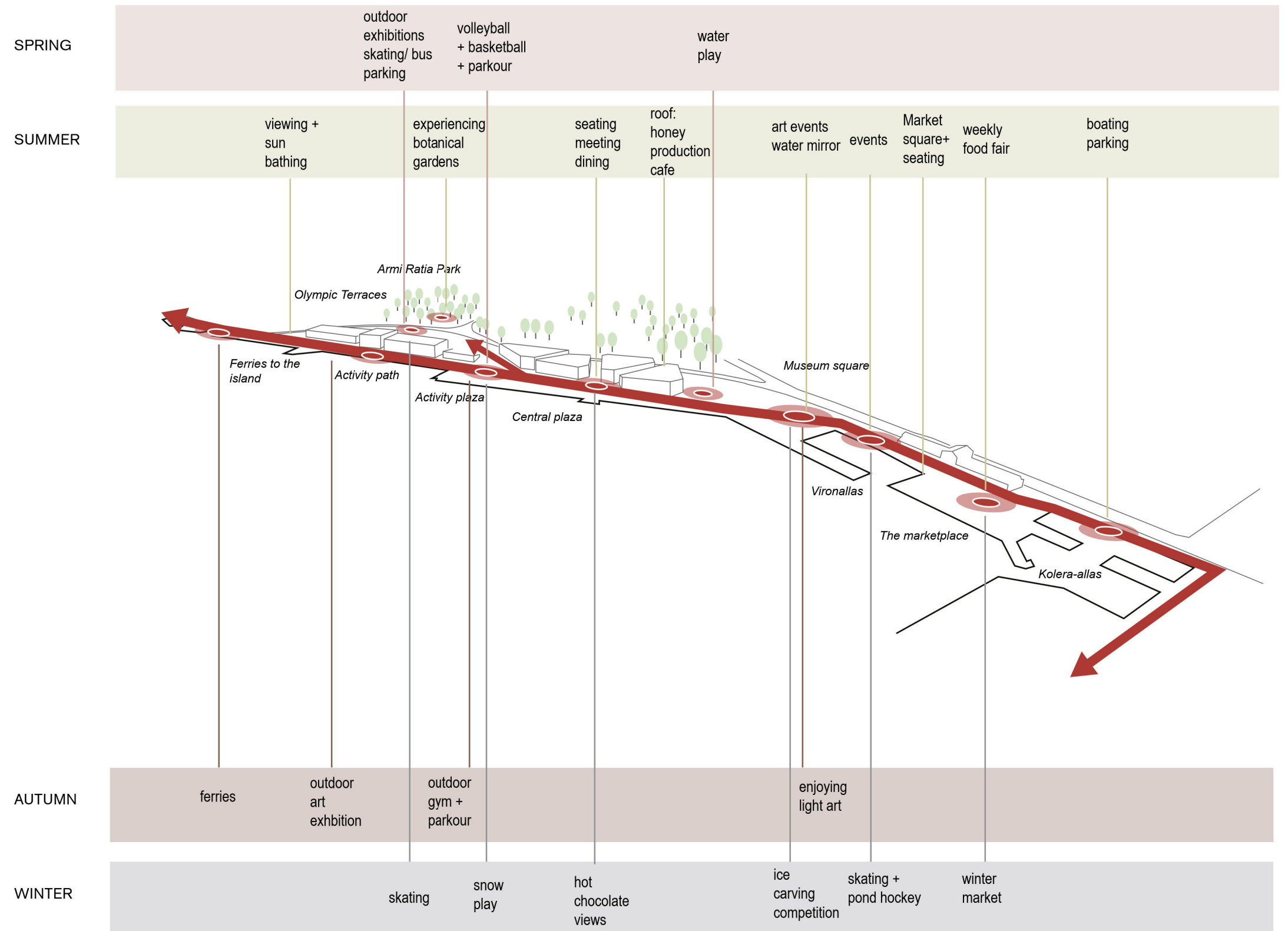


4.2 Liveability & resilience

Sustainability

Active area in all seasons

The diagram shows some of the activities that the multifunctional outdoor spaces offer around the year.



4.3 Biodiversity Sustainability

Climate change adaptation and storm-water management

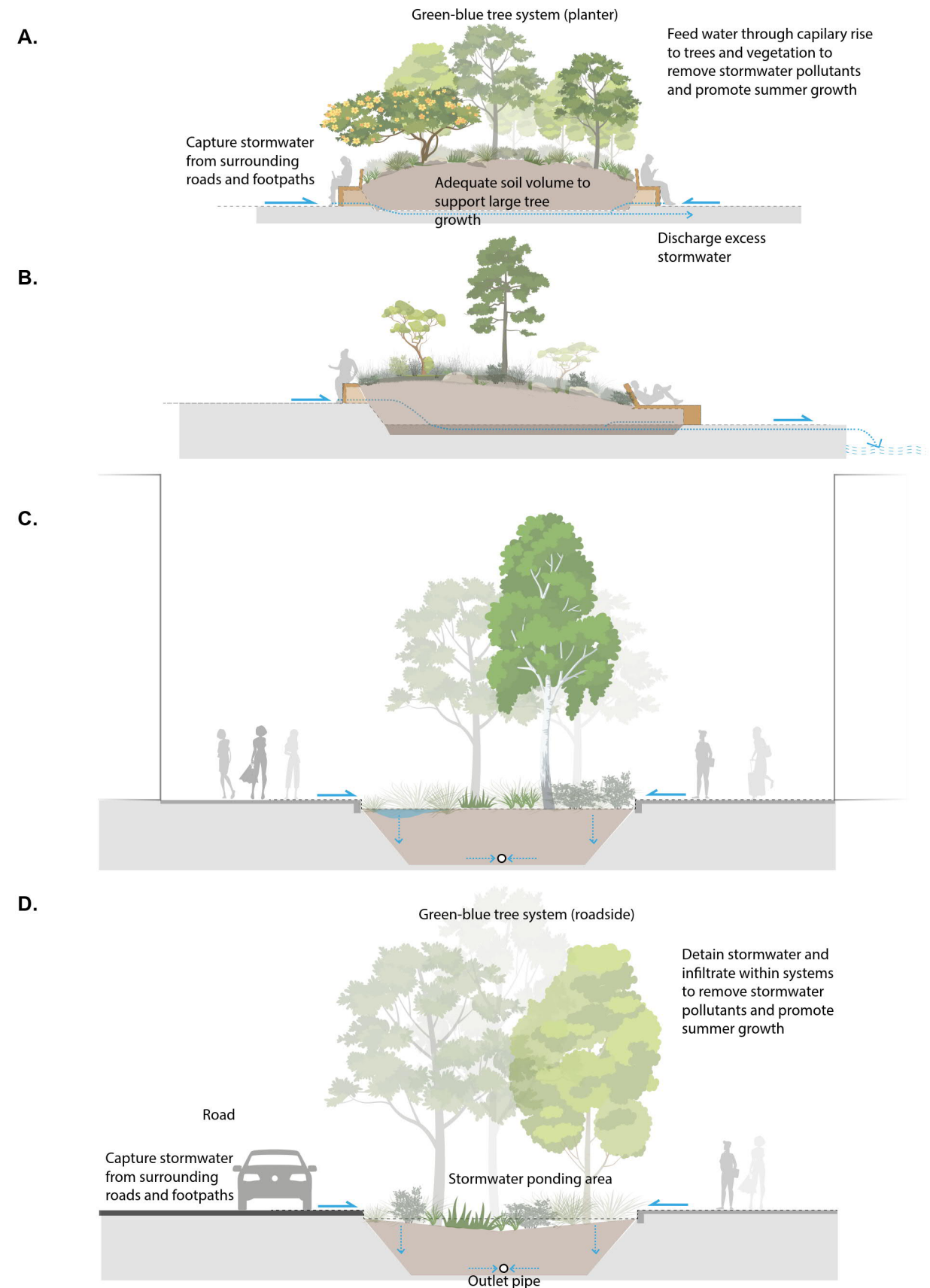
Climate change adaptation aspects such as sea level rise and flood protection as well as extreme rain and heat events are considered in many ways. Blue-green infrastructure (trees, vegetation, biofiltration, nature-based storm-water solutions) integrates the storm-water management solutions to the city structure and improves the micro climate (wind, heat and air quality).

Climate adaption tool (Green Scenario) was used to direct the landscape design towards a solution that responds to the site-specific needs and makes use of the opportunities provided by the site. Location-specific climate data, surface types and their quantities and number of trees were used as input data to calculate the existing (Baseline) and new (Concept Scenario) conditions. Landscape design was adjusted in an iterative manner based on the performance of different Green Scenario KPI's, one of which is the Helsinki Green Factor indicator. With the proposal's integrated landscape and storm-water design the green factor score was upgraded from the existing 0,15 to 1,1 which is even better than the city's recommendation (0,9).

NET POSITIVE STORM-WATER QUALITY FOOT-PRINT FOR THE DEVELOPMENT

- Promote infiltration and storm-water quality outcomes
- Use storm-water systems to increase biodiversity and habitat outcomes
- Detention is not an emphasis for the site, focus on quality
- Integrate storm-water systems within green social spaces

Typologies for integrated stormwater management system with nature-based solutions A. on the deck B. in the shoreline C. between new buildings D. along Laivasillankatu.



4.3 Biodiversity Sustainability

Green Scenario tool was used to direct the landscape design towards a solution that responds to the site-specific needs and makes use of the opportunities provided by the site. With the tool we've assessed socio-ecological and economic impacts of blue-green infrastructure and nature-based solutions.

Location-specific climate data, surface types and their quantities and number of trees were used as input data to calculate the existing (Baseline) and new (Concept Scenario) conditions. Landscape design was adjusted in an iterative manner based on the performance of different Green Scenario KPI's, one of which is the Helsinki Green Factor indicator. With the proposal's integrated landscape and stormwater design the green factor score was upgraded from the existing 0,15 to 1,1 which is even better than the city's recommendation (0,9).

With the data-driven computational design tool (Green Scenario) we have assessed the full socio-ecological and economic impact of blue-green infrastructure and nature-based solutions via a database-driven matrix.

Green Roofs + 34%
of total roof area

Green Spaces + 63%
vs. Existing

Paved Surfaces - 26%
non-permiable, vs. Existing

Semi-Paved Surfaces + 560%
existing non-permiable converted to permiable

Tree Quantity + 460%
vs. Existing



4.3 Biodiversity Sustainability

Climate adaption tool results

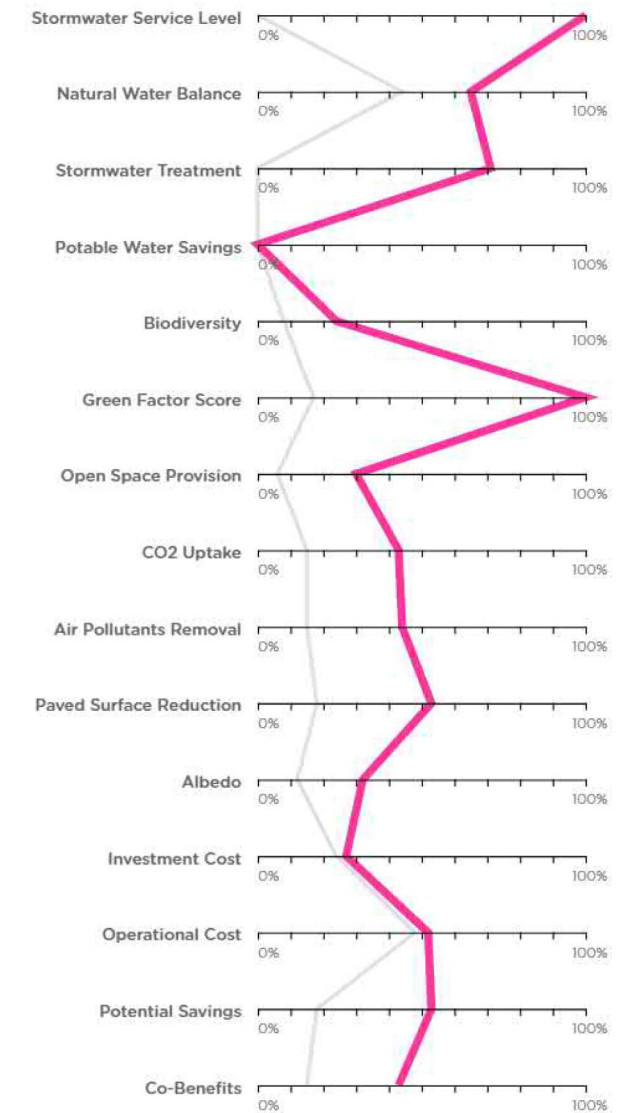
EXISTING SITUATION

Water	
Stormwater Service Level	0 %
Detention Volume	0 m3
Peak Run-Off Coefficient	0.93
Natural Water Balance	44 %
Evapotranspiration	24 %
Infiltration	5 %
Run-Off	71 %
Stormwater Treatment	0 %
TSS Removal	0 %
Nutrient Removal	0 %
Heavy Metals Removal	0 %
Potable Water Savings	0 m3/y
Open Space & Green	
Biodiversity	0.08
Green Factor Score	0.15
Open Space Provision	6 %
Trees	44
Green Spaces	8,900 m2
Green Roofs	0 m2
CO2 Uptake	4.915 t/y
Air Pollutants Removal	67.46 kg/y
Nitrogen Oxide Removal	12.37 kg/y
Ozone Removal	9.58 kg/y
Sulfur Dioxide Removal	35.53 kg/y
Particulate Matter Removal	9.98 kg/y
Heat & Microclimate	
Paved Surface Reduction	18 %
Albedo	12

PROPOSED CONDITION

Water	
Stormwater Service Level	159 %
Detention Volume	2,792 m3
Peak Run-Off Coefficient	0.71
Natural Water Balance	65 %
Evapotranspiration	20 %
Infiltration	38 %
Run-Off	42 %
Stormwater Treatment	71 %
TSS Removal	80 %
Nutrient Removal	58 %
Heavy Metals Removal	75 %
Potable Water Savings	0 m3/y
Open Space & Green	
Biodiversity	0.24
Green Factor Score	1.1
Open Space Provision	30 %
Trees	246
Green Spaces	14,498 m2
Green Roofs	6,699 m2
CO2 Uptake	12.326 t/y
Air Pollutants Removal	174.67 kg/y
Nitrogen Oxide Removal	20.14 kg/y
Ozone Removal	15.58 kg/y
Sulfur Dioxide Removal	57.64 kg/y
Particulate Matter Removal	81.31 kg/y
Heat & Microclimate	
Paved Surface Reduction	53 %
Albedo	32

COMPARISON



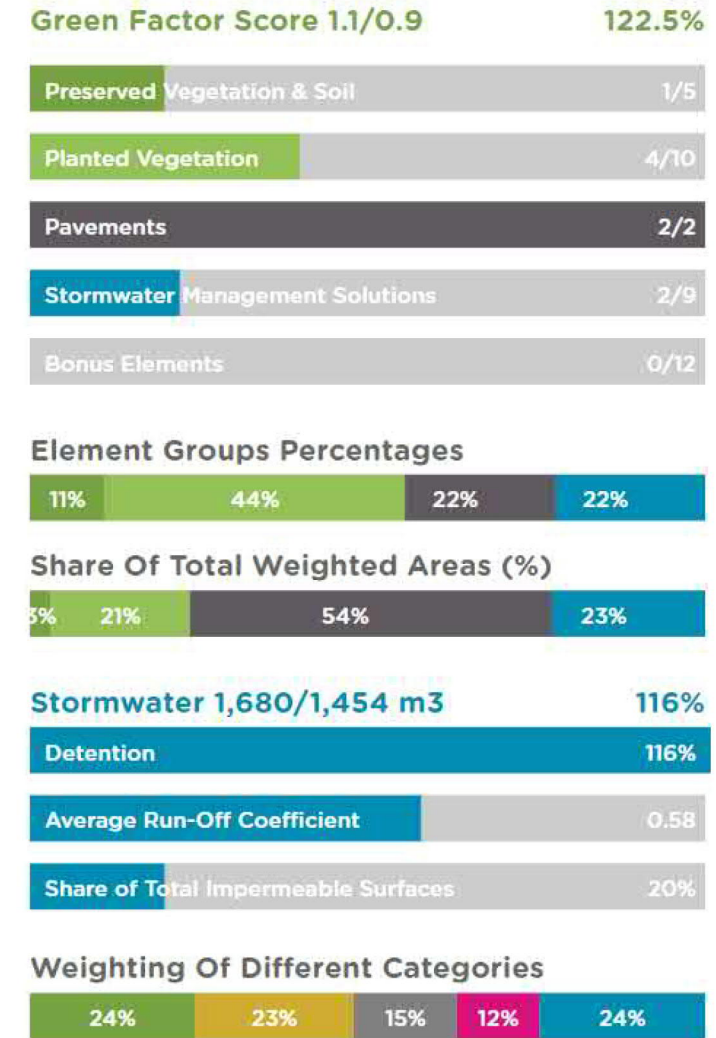
4.3 Biodiversity Sustainability

Climate adaption tool results

EXISTING SITUATION



PROPOSED CONDITION



4.4 Circularity Sustainability

Circular economy provides the solutions for sustainable urban development. In our community, the full potential of these solutions is often yet to be discovered. Saaret supports new and ambitious techniques and exploits circularity principles in multiple levels. Holistic approach to circularity is built in the nature of the area with it's existing heritage and history, and protected, maintained and reused buildings. Reuse adds layers in the area and supports de-carbonization. The new development concepts are designed to support the same characteristics, and to help the industry in developing new circularity solutions. Saaret is prepared for changing climate conditions and needs of future generations in the ever changing social environment with flexible and sized design solutions. De-carbonization agenda drives us to exploiting local and existing resources and acting as a pathfinder in this.

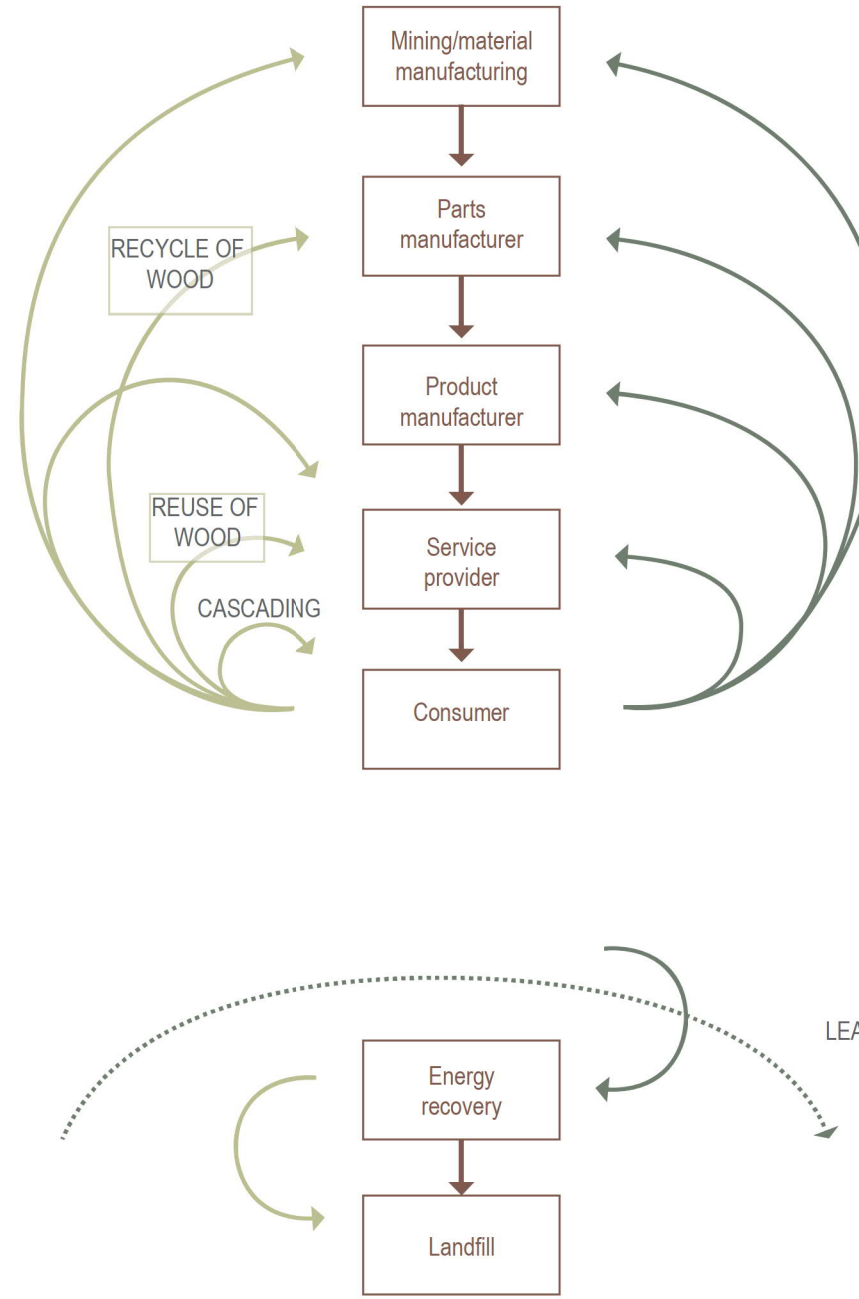
BIOLOGICAL MATERIALS RENEWABLE MATERIALS

EFFICIENT RESOURCE USAGE

- PROPOSED:**
- Recycling valuable nutrients back into the soil by composting plant waste on-site
 - Using stormwater as a resource
 - Making use of existing seed banks and microbiota by reusing topsoil collected from nearby construction sites
 - Harvesting seeds from the meadows that are on-site and share them to visitors
 - Dividing perennials, especially from Armi Ratia park, to provide new plants that can be used on-site and shared to visitors

PREPARING FOR FUTURE:

- Multifunctional green roofs
- Preparedness for heavy flood and rain events with flood routes and decentralized stormwater management



TECHNICAL MATERIALS NON-RENEWABLE MATERIALS

EFFICIENT RESOURCE USAGE

- PROPOSED:**
- Space efficiency and versatility with building layout and structures that enable different end uses such as office, service or accommodation.

PREPARING FOR FUTURE:

- Long life cycle materials, fit to the end use, reduce resource intensity in the long run

REUSE AND RECYCLING

PROPOSED:

- Using demolished building parts and materials such as glulam beams and bricks in new development
- Bringing reused building elements or materials from elsewhere for the developed projects (glass , natural stones and wood).
- Deconstructed or demolished buildings forwarded to reuse or recycling elsewhere

PREPARING FOR FUTURE:

- Planning for deconstruction and reuse
- Materials recyclability

MAINTENANCE

PROPOSED:

- Reuse of existing Olympia Terminal Building and underground spaces

PREPARING FOR FUTURE:

- Long life cycle materials, fit to the end use, reduce resource intensity in the long run

CIRCULARITY DIAGRAM

4.5 CO2 Emissions Sustainability

Climate change mitigation has been considered by making most of the existing resources in the area and by exploiting the best available low carbon solutions in the market. The target is to minimize the whole life cycle carbon footprint of the development and exploit the positive climate impacts the area can provide.

New building products make a significant effect in the carbon footprint in the construction phase. Carbon balance for new buildings' was calculated according to the Method for the Whole Life Carbon Assessment of Buildings (Ministry of the Environment, Helsinki 2019). Method is adjusted to cover the construction of the planned 4 new building projects. The main idea has been to

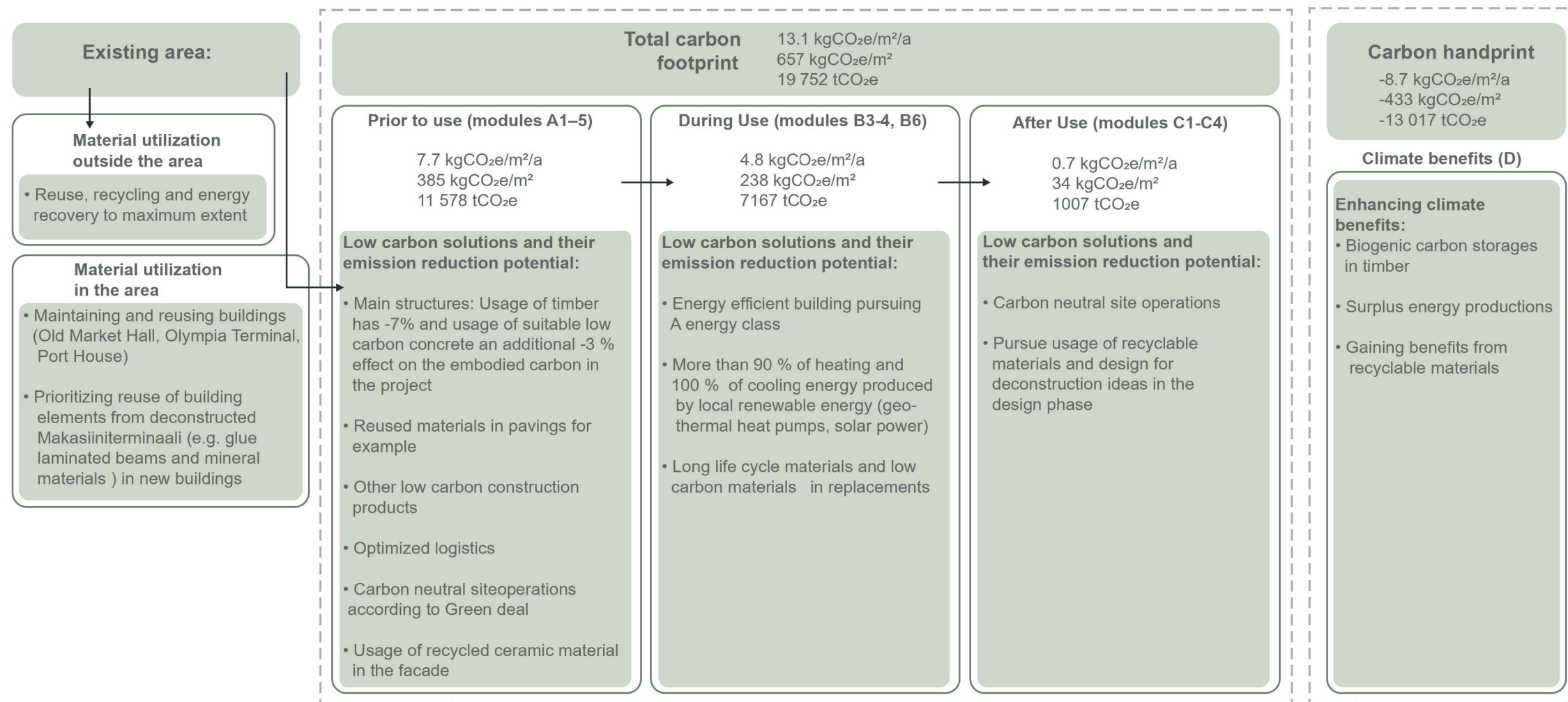
concentrate the building masses in a compact area to aim for resource efficiency and make the buildings adjustable beyond the needs of the present with flexible solutions (floor height, structures). The buildings were designed to have hybrid timber-concrete-steel frame founded on piling, and weatherproof glass and ceramic façade. The solution is designed to meet optimal balance between minimizing the carbon footprint with organic and low-carbon materials but simultaneously meeting the needs of the marine climate and changing climate conditions. The timber in the building frame stores carbon and other materials can be utilized after use, these effects stand out in the building's carbon hand print.

Saaret has an ambition to recycle deconstructed materials from the area in the new buildings to gain additional benefits to the carbon footprint, and more importantly, move the building industry to the next chapter of lower-carbon economy. Buildings in the area are connected with wide basement floor connected to service tunnel, vital for the functionality of the area, but also adding heavy carbon intense structures. Service tunnel itself is not accounted into the building's carbon footprint. Carbon neutral construction site operations and optimized logistics support the low-carbon agenda during the construction phase of the area.

During the use, carbon footprint is minimized with class A energy efficiency and heating provided with ground source heat pumps and supported by district heating and solar panels provide on-site electricity. The energy concept covering the entire developed area is described in more detail later in the proposal. Sinks such as trees and other vegetation and biochar can also support the climate change mitigation in the area during use.

Carbon footprint and hand print results with new construction's low carbon solutions are presented in the diagram. The scope of the study was adjusted to ongoing concept design phase, building elements lacking information and insignificant effect on the total footprint were

excluded from the study (presumably less than 5 % in total). Also, some values and quantities rely on database estimates or assumptions based on reference buildings or calculation tools. Environmental data is from Emission database for construction (typical values, SYKE 2021), product specific EPD's or other general databases.

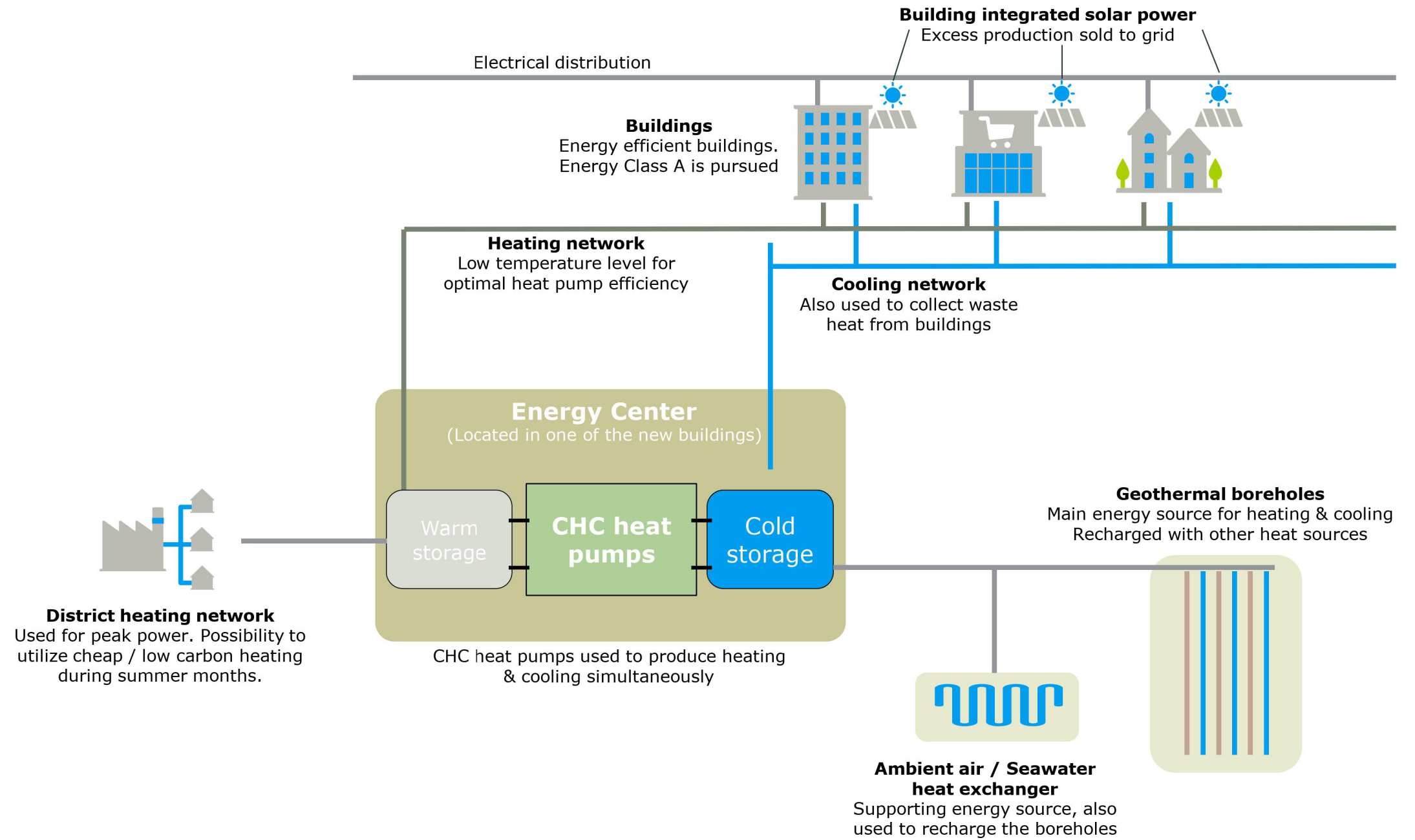


CARBON DIAGRAM

4.5 CO2 Emissions Sustainability

More than 90% of heating and 100% of cooling energy demand will be produced by heat pumps utilizing local renewable sources, mainly based on geothermal energy supported by sea water or ambient air as a heat source. District heating (or alternatively electrical boilers) will be used for peak power heating during cold winter periods. The estimated number of geothermal boreholes, required for the existing harbour buildings and the four new buildings, is roughly 45 pieces of 400-meter-deep holes. Based on early-stage geothermal planning the required number of boreholes can be fitted in the competition area. Part of the boreholes will be drilled diagonally under the buildings. The borehole field will be recharged with excess heat from buildings and by heat taken from the sea water or ambient air. This will increase the total energy efficiency of the system and ensure that the geothermal energy supply will last a long life cycle.

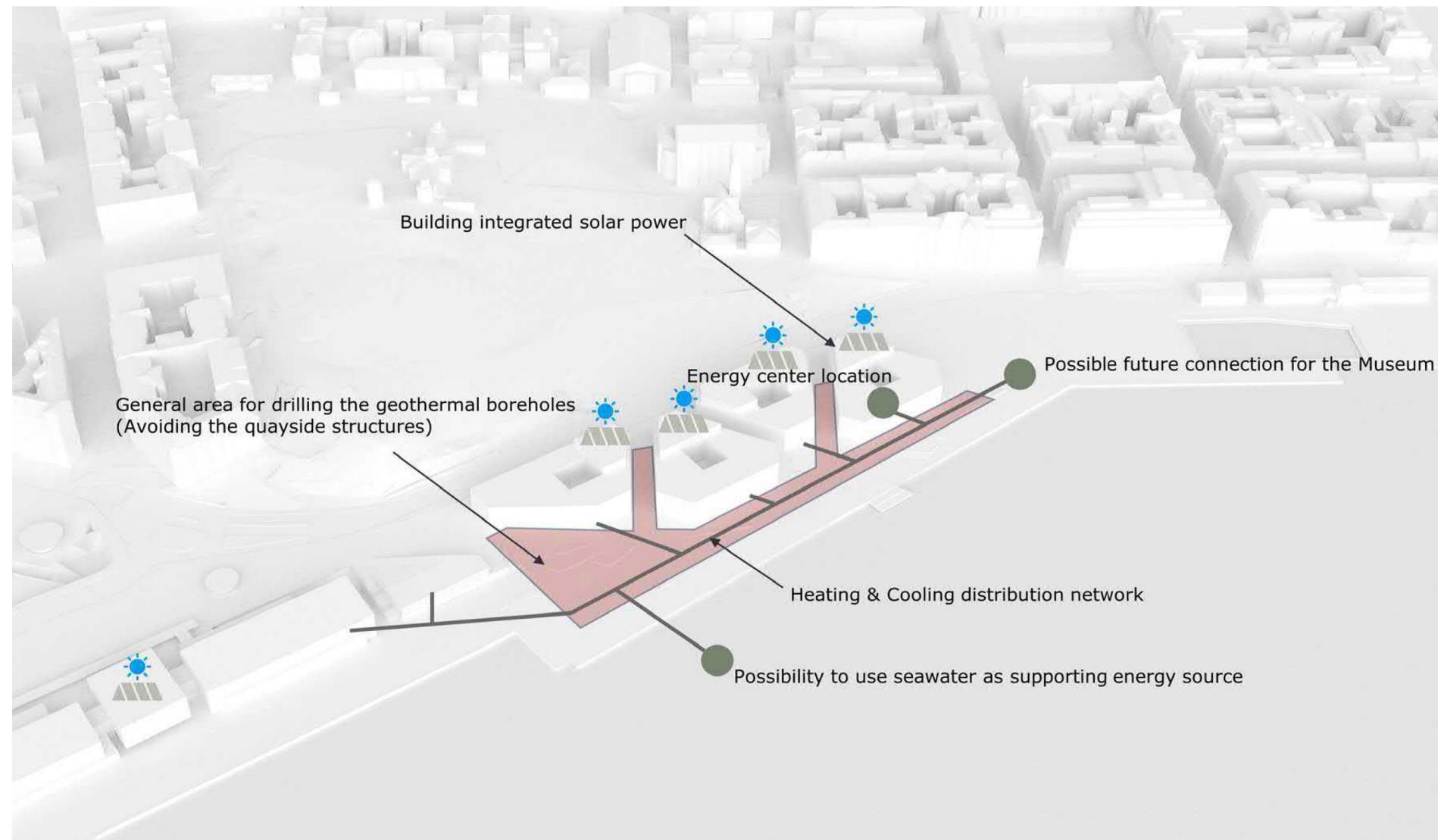
The main heat pumps will be located in the northern-most of the new buildings, where from the produced heating and cooling is distributed to the neighbouring buildings using a local energy distribution network. The temperature levels of the network will be optimized for best possible heat pump performance, to minimize the electricity demand and operational carbon emissions. Excess and waste energy (Incl. cooling energy) from buildings will be supplied into the energy distribution network to benefit the whole energy system and all buildings connected to it. The proposed architect and design museum (to be located in the north side) can later join the energy network as a part of the system.



ENERGY CONCEPT PRINCIPLE DIAGRAM

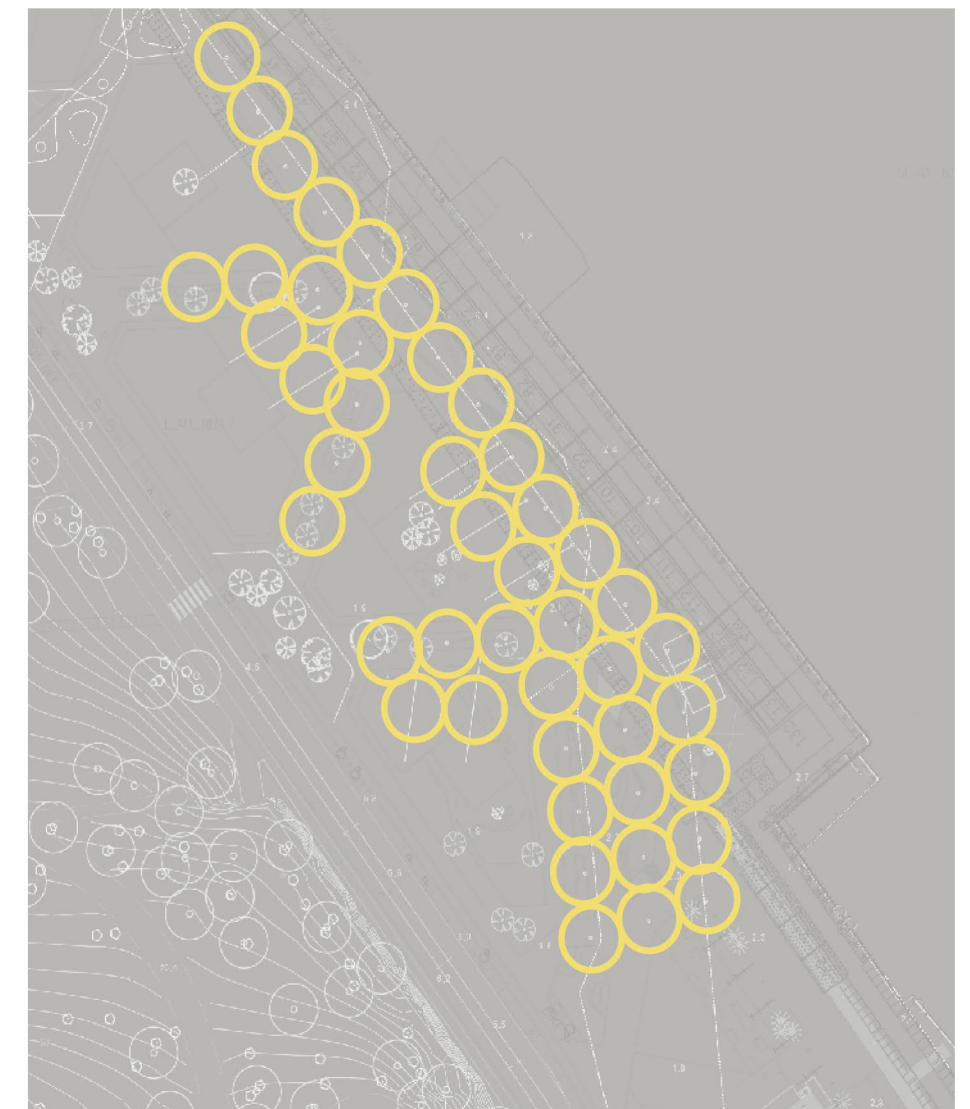
4.5 CO2 Emissions Sustainability

Makasiiniranta energy system



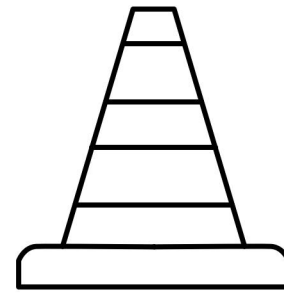
All the new buildings will be targeted to achieve the best energy class A. Energy class A will be pursued also for the existing harbour buildings, considering possible restrictions due to preservation of these buildings. High level of energy efficiency and low energy-based carbon emissions will be achieved by investing into excellent properties of building envelopes and technical building systems together with local renewable energy production.

Building integrated solar panels will be used to produce renewable electricity for the buildings. Excess electricity will be sold to public grid. The goal is to build as self-sufficient block with renewable energy sources as technically possible now with improving options in the future

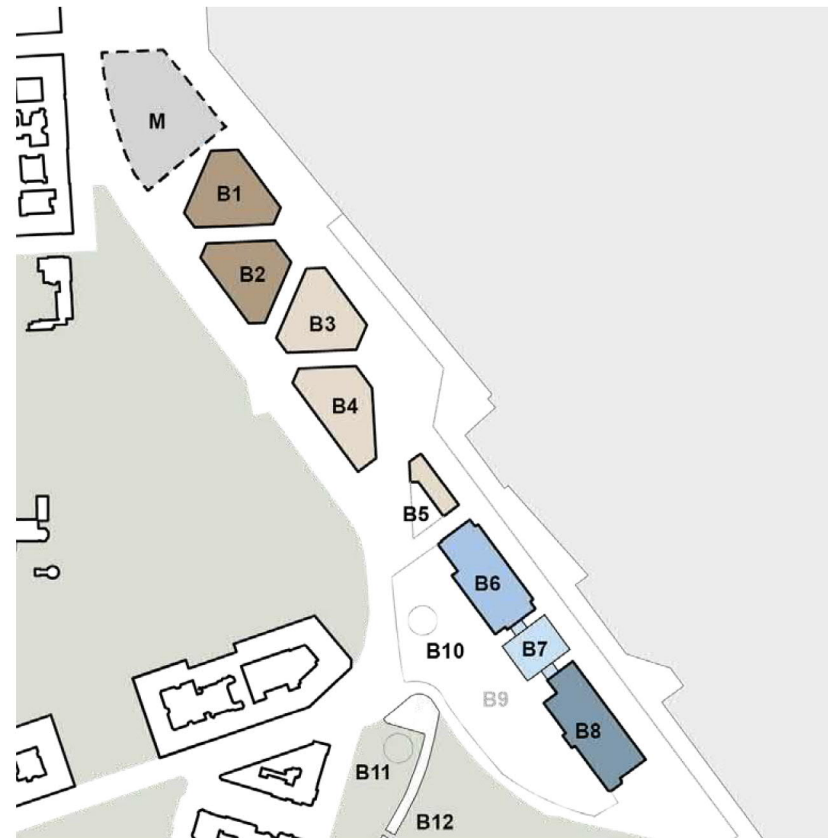


Early stage draft of geothermal borehole locations

- No. of boreholes: 45
- Depth of boreholes: 400m
- Large yellow circle represents the 15m diameter area of effect
- Small circle in the middle of the large circle represents the spot where the drilling starts
- A line starting from a small circle represents a diagonal borehole.
- The harbour structures are avoided
- Other borehole locations are also possible to consider.



5. Technical feasibility



PHASING DIAGRAM

Maintenance and parking

All service traffic is arranged from the most southern end of Olympia Terminal building. The deck at the southern end will be raised to accommodate all service traffic, including the larger trucks headed to the museum service yard.

New development creates the need for a preliminary maximum of 174 car slots without any deductibles. Parking will be arranged on existing Tähtitorninvuori parking facility with a total of 147 slots. There will also be space available in the logistics & storage section of the reuse area to organize employee parking below deck. Some handicap and drop-off slots will be arranged closer to building entrances. Bike parking for over 700 bikes will be integrated in new and existing buildings both above and underground.

Public pedestrian and cycling routes

Pedestrian routes connect the area in a fluid way to all directions; Kauppatori in the north, Tähtitorninvuori to the west and Kaivopuisto to the south. Laivasillankatu and the alleys between the buildings have plentiful space for pedestrians and quayside is entirely dedicated to pedestrians. There is also plenty to see and do in the quayside, which will transform it to a pleasant, attractive "seaside" route.

Laivasillankatu has a quality bike connection (main route) which enters the area from the north and turns towards Ullanlinna in front of the Olympia terminal. There is also a secondary bicycle route, which diverges from the main route towards Kaivopuisto quayside in front of the Olympia terminal.

Presentation of key technical solutions and innovations, description of foundation engineering and structural solution

The new buildings on Makasiiniranta will be built on pile foundations. Both the basement and the ground floor are made entirely of concrete, e.g. taking into account flood, collision and stability risks. Low-carbon products are preferred when choosing concrete. The frame of the upper layers is implemented as a hybrid frame, so that the columns are timber-structured, the beams are steel structured and the midsoles are wood-concrete composite structures. The joint structure has been chosen instead of a pure wooden midsole for better technical properties, e.g. vibration and fire resistance, due to. The upper floor is made of multi-layered wood. The hybrid body enables minimized carbon emissions without compromising on technical requirements.

The tunnel on Makasiiniranta will be constructed using a drill pile wall and massive reinforced concrete slab. The tunnel is made watertight e.g. extending all the piles into the rock. The bottom slab of the tunnel will be anchored to the rock because of the uplift pressure of the water. In addition to water resistance and the strength of the structures, e.g. the fire resistance will be taken into account. The buildings on Makasiiniranta will be built partly on top of the tunnel."

Noise & air quality impacts

Air quality today from street traffic emissions is rather good, annual average nitrogen dioxide levels are around 15 µg/m³ (limit 40 µg/m³). Emissions from nearby cruise ship traffic are known to contribute air quality negatively and may need to be evaluated later in more detail.

Noise from street and tram traffic exceeds daily average 65 dB near Laivasillankatu street, leading to special noise insulation requirements of hotel façade or other sensitive spaces. Tram traffic may cause rather high noise maximum levels on the street-side façades, and also cause ground borne noise and vibration, which needs to be assessed later. If cruise ships are staying overnight at Makasiinilaituri, low frequency noise from auxiliary engines may also need to be analysed separately.

Plot subdivision and easements

Plot subdivision and registration as well as easements will be negotiated and defined in co-operation with the city in the next phases.

Phasing & estimated implementation schedule

The central part of the competition area, where the main volume of the new buildings are placed, can be implemented in four different phases. The museum can be implemented independently regardless of the other phases, but the service traffic solution needs to be designed in co-ordination.

Fire and rescue solutions

All the buildings are designed according to the Finnish fire regulations. They are all reachable with fire trucks and skylift through alleys and public areas around the buildings.

New Buildings:

The new buildings will be equipped with automatic fire extinguishing equipment and

the fire class of the buildings will be P2.

The maximum size of the fire compartment according to the intended use may be 2400 m² for offices and 800 m² for the hotel.

The load-bearing structures of the buildings R60 (can be wood) and the fire compartment class EI60.

The exit distance may be 60 m in the office part and 45 m in the hotel.

Internal surface classes of buildings office D-s2, d2 and hotel C-s2,d1

The façades of the buildings are ceramic tiles.

Old building +new section:

The old existing buildings and the building between them are new fire class P1. The maximum fire compartment size according to the intended use shall be 2400 m² or 12,000 m² in assembly and business premises (protection level 3)

Building load-bearing structures R60 (less than 600 MJ/m²), R90 (600-1200 MJ/m²) and R120 (over 1200 MJ/m²). In the basement, an additional requirement for class A2 material.

The fire compartmentation class of buildings depends on fire loads of less than 600 MJ/m² EI60, 600-1200 MJ/m² EI90 and more than 1200 MJ/m² EI120

If the building is equipped with automatic fire extinguishing equipment, then all spaces EI60.

The exit distance shall be 45 m or 60 m (protection level 3).

Class requirements for internal surfaces:

Use	Surface	Fire class of building	
		P1	
Assembly and business premises			
fire compartment maximum 300 m ² : <i>restaurants, shops</i>	walls and ceilings	D-s2, d2	
fire compartment exceeding 300 m ² : <i>restaurants</i>	walls and ceilings	C-s2,d1	D-s2, d2*
fire compartment exceeding 300 m ² : <i>shops, exhibition halls</i>	walls and ceilings	B.s1,do	C-s2, d1*
	floors	D _{FL} -s1	D _{FL} -s1
Office premises	walls and ceilings	D-s2, d2 ¹⁾	

Plan's feasibility, flexibility and potential for development

The footprint, height and bearing structure of the four new blocks allow large flexibility for different functions as well as future alterations. The façades, materials and structural principals are chosen in order to allow future changes as well as assembling and disassembling.

5.2 Traffic

Technical feasibility

New development creates the need for a preliminary maximum of 174 car slots without any deductibles. Parking will be arranged on existing Tähtitorninvuori parking facility with a total of 147 slots. There will also be space available in the logistics & storage section of the reuse area to organize employee parking below deck. Some handicap and drop-off slots will be arranged closer to building entrances. Bike parking for over 700 bikes will be integrated in new and existing buildings both above and underground.

Building 1

6071 k-m2 of which roughly 859 k-m2 is commercial, 4214 k-m2 of office and 1000 k-m2 of restaurants for a total of 26 car parking spaces and 123 bicycle parking spaces

Building 2

6206 k-m2 of which roughly 453 k-m2 is commercial, 4753 k-m2 of office and 1000 k-m2 of restaurants for a total of 27 car parking spaces and 126 bicycle parking spaces

Building 3

6012 k-m2 of which roughly 1645 k-m2 is commercial and 4367 k-m2 hotel for a total of 24 car parking spaces and 42 bicycle parking spaces

Building 4

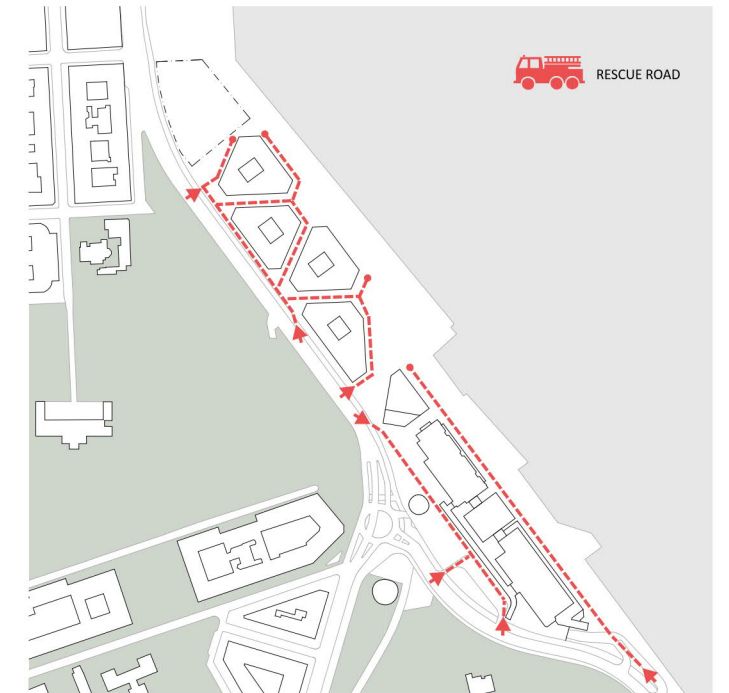
6323 k-m2 of which roughly 1751 k-m2 is commercial and 4572 k-m2 hotel for a total of 26 car parking spaces and 46 bicycle parking spaces

Reuse, terminal and pavilion

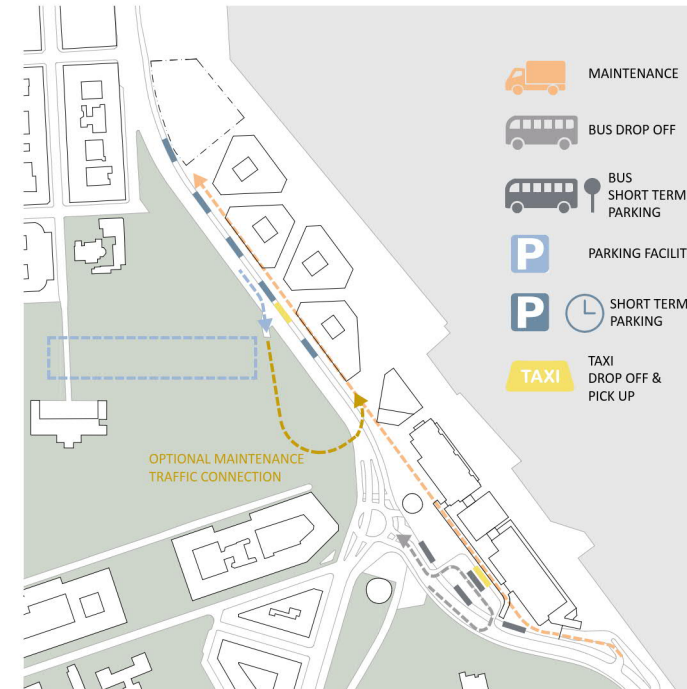
22 355 k-m2 of which roughly 375 k-m2 is restaurants, 180 k-m2 commercial, 4300 k-m2 logistics/storage and 17 500 k-m2 of public spaces for a total of 71 car parking spaces and 200 bicycle parking spaces



PEDESTRIAN & BICYCLE ROUTES



RESCUE ACCESS



SERVICE TRAFFIC, PARKING & DROP OFF



TEMPORARY TRAFFIC ARRANGEMENTS

5.4 Areas

Technical feasibility

Building	Gross area					Total
	1	2	3	4	5	
Plan 0						6 370
Plan 1	2 265	2 125	2 250	2 345	1 600	10 585
Plan 2	2 025	1 870	2 000	2 120		8 015
Plan 3	2 025	1 870	2 000	2 120		8 015
Plan 4	430	1 030	430	440		2 330
	6 745	6 895	6 680	7 025	1 600	35 315

Floor 1-4	Bldn.					Total
	1	2	3	4	5	
Gross area	6 745	6 895	6 680	7 025	1 600	28 945

Floor 0	Bldn.				Total
	1	2	3	4	
Nett area					6 370

Building	Nett area					Total
	1	2	3	4	5	
Plan 0						5 250
Plan 1	2 039	1 913	2 025	2 111	1 440	9 527
Plan 2	1 823	1 683	1 800	1 908		7 214
Plan 3	1 823	1 683	1 800	1 908		7 214
Plan 4	387	927	387	396		2 097
	6 071	6 206	6 012	6 323	1 440	31 301

Floor 1-4	Bldn.					Total
	1	2	3	4	5	
Nett area	6 071	6 206	6 012	6 323	1 440	26 051

Floor 0	Bldn.				Total
	1	2	3	4	
Nett area					5 250

Plantrooms	600	600	600	600	2 400
Energy center	200	0	0	0	200
Storage	150	200	120	630	1 100
Bicycles	0	650	0	0	650
Loading bay	0	0	900	0	900
					5 250

Building	Nett area, Office					Total
	1	2	3	4	5	
Plan 0						640
Plan 1	180	460				3 506
Plan 2	1 823	1 683				3 506
Plan 3	1 823	1 683				1 314
Plan 4	387	927				
	4 212	4 753	0	0	0	8 965

Building	Nett area, Hotell					Total	Rooms 3	Rooms 4
	1	2	3	4	5			
Plan 0						740	0	0
Plan 1			380	360		3 708	58	65
Plan 2			1 800	1 908		3 708	58	65
Plan 3			1 800	1 908		783		
Plan 4			387	396				
	0	0	4 367	4 572	0	8 939	116	130

Building	Nett area, Comercial					Total
	1	2	3	4	5	
Plan 0						8 147
Plan 1	1 859	1 453	1 645	1 751	1 440	0
Plan 2						0
Plan 3						0
Plan 4						0
	1 859	1 453	1 645	1 751	1 440	8 147

	Gross area							
	Sea Museum	Entrance	Terminal	Event	Pavillions	Wintergarden	Garden shaft	Total
	6	7	8	9	10	11	12	
Plan 0								18 250
Plan 1	1 800	400		14 500		850	700	5 200
Plan 2	1 900	1 000	1 900		400			
	3 700	1 400	1 900	14 500	400	850	700	23 450
								Total m2
New		1 400			400			1 800
Reuse	3 700		1 900	14 500		850	700	21 650

	Nett area							
	Sea Museum	Entrance	Terminal	Event	Pavillions	Wintergarden	Garden shaft	Total
	6	7	8	9	10	11	12	
Plan 0								15 030
Plan 1	1 620	360		13 050				6 075
Plan 2	1 710	900	1 710		360	765	630	
	3 330	1 260	1 710	13 050	360	765	630	21 105

Floor 1-4	Bldn.							Total
	6	7	8	9	10	11	12	
Gross area	3 700	1 400	1 900	14 500	400	850	700	23 450

Bicycle Parking	650
Event Spaces	3 200
Exhibition Spaces	2 350
Workshops	1 900
Ateliers	2 200
Logistics/Storages	4 200

Floor 1-4	Bldn.							Total
	6	7	8	9	10	11	12	
Nett area	3 330	1 260	1 710	13 050	360	765	630	21 105

5.5 Project Organization

Technical feasibility

Konsortium GRAN

Konsortium GRAN is a team of experienced and enthusiastic professionals. Both K2S and White Architects are acclaimed design practices specialized in exceptionally demanding urban planning and architecture. Ramboll is Scandinavia's leading multidisciplinary consultancy company. The company responsible for project management is HTJ, one of the most experienced construction management consultants. All members of the team have previously worked together in most challenging projects. We are committed as consortium to continue the development of Makasiiniranta at the South of Harbour of Helsinki.

The financial resources and capabilities are brought by Niam, an experienced and well-known real estate investor who places a high value to sustainability in all the investments they are making. Niam has currently close to 4 bn eur real estate investments under management through several Nordic funds.

Niam is financing the consortium's participation to the competition on behalf of the funds that Niam is managing. These funds will be the final developers and investors of the project. Niam has wide investor base and good relationships with all the major banks operating in the Nordic region thus providing good financial capabilities for successful development.

Konsortium GRAN consists of project management, designers and investors which allows flexible development of Makasiiniranta with the City of Helsinki. The best possible construction companies will be chosen according to the planning and design as well as technical and financial solutions.

K2S ARCHITECTS

white

RAMBOLL

HTJ

NIAM

5.5 Project Organization

Technical feasibility

SAARET

Konsortium GRAN

Team members:

Urban planning and architecture

Mikko Summanen, Architect SAFA, professor, K2S Architects
Kimmo Lintula, Architect SAFA, professor, K2S Architects
Niko Sirola, Architect SAFA, professor, K2S Architects
Matti Wäre, Architect SAFA, K2S Architects
Sebastian Zuleger, Architect SAFA, K2S Architects
Anna Suominen, Bachelor of architecture, K2S Architects
Iiro Virta, Bachelor of architecture, K2S Architects
Yusuke Kawashima, Bachelor of architecture, K2S Architects

Fredrik Källström, Architect, White Arkitekter
Carl Bäckstrand, Architect, White Arkitekter
Martin Johnson, Architect, White Arkitekter
Lisa Fransson, Architect, White Arkitekter

Landscape architecture

Gustav Jarlöv, Landscape Architect, White Arkitekter
Julia Vilkenas, Landscape Architect, White Arkitekter
Matilda Åström, Landscape Architect, White Arkitekter
Elias Stålnacke, Landscape Architect, White Arkitekter
Erik Kiltorp, Landscape Architect, White Arkitekter

Elina Kalliala, Ramboll Finland Oy
Aino-Kaisa Nuotio, Ramboll Finland Oy
Laura Virtanen, Ramboll Finland Oy
Kai Hakala, Ramboll Finland Oy

Traffic planning

Tommi Eskelinen, Ramboll Finland Oy
Topi Jormalainen, Ramboll Finland Oy

Structural design

Terhi Ala-Ilkka, Ramboll Finland Oy

Geotechnical design

Kati Tyynelä, Ramboll Finland Oy

Civil engineering

Tapio Karvonen, Ramboll Finland Oy

Fire engineering

Mika Toivanen, Ramboll Finland Oy

Energy solutions

Santeri Siren, Ramboll Finland Oy

Circular economy & CO2-calculations

Sanni Heikkinen, Ramboll Finland Oy

HVAC

Markus Tuovinen

Rock engineering

Jari Heikkilä

Commercial development

Aarne Mustakallio, JLL
Eero Salminen, Ramboll Finland Oy

Project management

Jussi Hynninen, Rakennuttajatoimisto HTJ Oy

Investor

Antti Muilu, NIAM

Designated experts

Project management: Jussi Hynninen, HTJ
Chief designer: Mikko Summanen, K2S Architects
Landscape architect: Gustav Jarlöv, White Arkitekter
Traffic planning officer: Tommi Eskelinen, Ramboll Finland

The designated experts and the named organizations have remained the same as in the approval phase.
The expert team has been expanded with new specialist during the competition phase.

The project organization has been as described in the approval phase.

The reference requirements are fulfilled as presented in the approval phase.

The owner of the copyright

Arkkitehtitoimisto K2S Oy
White Arkitekter

Contact details

Mikko Summanen
Arkkitehtitoimisto K2S Oy
Pohjoinen Hesperiankatu 15 A 13
00260 Helsinki
puh. 09 6831 3961
mikko.summanen@k2s.fi