

Silmu invited design competition

Helsinki • Evaluation report, 17 June 2020



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Please note: The section and plan drawings are not in scale

1. INVITED DESIGN COMPETITION

1.1 Information about the competition organiser and the purpose and nature of the competition

Earlier this year, Varma Mutual Pension Insurance Company and Stora Enso Corporation joined forces with the City of Helsinki to organise an invited design competition with view to securing a high-end commercial building and hotel for Katajanokka in the Finnish capital.

1.2 Competition participants

The following architectural practices were invited to participate in the competition:

- Arkkitehtitoimisto ALA, Finland
- Anttinen Oiva Arkkitehdit Oy, Finland
- PES-Arkkitehdit Oy, Finland
- White Arkitekter, Sweden
- Snøhetta, Norway
- Shigeru Ban Architects, Japan

1.3 Jury

The design proposals were evaluated by a jury comprising:

- Ilkka Tomperi, Investment Director, Varma, Chair
- Sari Raunio, Property Development Director, Varma
- Ville Hietalahti, director, Senior Vice President, Enterprise Risk Management and Real Estate Finland, Stora Enso
- Antto Kauhanen, Business Development Manager, Wood Products, Stora Enso
- Anni Sinnemäki, Deputy Mayor, City of Helsinki

- Janne Prokkola, Head of Unit, Urban Environment Division, City of Helsinki. (during the competition program phase Marja Piimies, Head of Detailed Planning, Urban Environment Division, City of Helsinki)
- Marjaana Yläjääski, Senior Architect, Urban Environment Division, City of Helsinki
- Samuli Miettinen, architect, member of the jury selected by SAFA on behalf of the design competition participants

The secretariat was provided by architect Ilkka Niukkanen, Haahtela Yhtiöt, who will also act as liaison for the competition organiser.

The following professionals and/or organisations supported the jury in their deliberations:

- Wood construction specialist, Ramboll Finland Oy
- Fire safety specialist, KK-Palokonsultti Oy
- Environmental consultant, Green Building Partners Oy
- Acoustics consultant, Akukon Oy
- Functional design consultant for hotel, CBRE Finland Oy
- Construction cost specialist, Haahtela-yhtiöt
- Specialist support was provided by City of Helsinki in the following areas: Building technology and cost design, urban and landscape design, transport management

Under the rules of the competition, the participants were precluded from engaging the above experts in support of their submission. The jury reserved the right to consult further specialists during the competition. The subject experts and secretary did not take part in the decision-making process.

1.4 Approving the competition programme

The competition programme and appendices have been approved by the competition organisers, the jury and the competition secretary appointed by SAFA.

1.5 Competition period

The competition launched on 12 February 2020 and ended on 18 May 2020. Due to the challenges posed by the global coronavirus pandemic, the competition deadline was extended on 21 April 2020 by around two weeks.

1.6 Competition seminar and questions from participants

A seminar for the participants took place at Stora Enso head office on 26 February 2020. It was attended by representatives from the architectural prac-

tices invited to participate in the competition, the competition organisers and members of the jury.

A total of seven questions relating to the competition brief were received by the deadline of 28 February 2020. Answers were sent to all participants by email on 13 March 2020.

1.7 Competition entries

Six competition entries were submitted by the deadline. All entries fulfilled the criteria set out in the competition programme. The entries, in alphabetical order, were:

Beacon
JUURET
Rantametsä
SPRING
uusi aalto
ZANDER

All entries were approved for jury evaluation.



2. COMPETITION BRIEF

2.1 Background

The City of Helsinki has granted Varma an option to develop a council-owned site in Katajanokka to build a head office standard commercial building and other premises, including a hotel and other commercial space.

It is expected that the development will deliver an environmentally and socially sustainable building with an extended lifespan, both in terms of its structure and function.

The site at Katajanokanlaituri 4 is owned by the City of Helsinki, while the quayside structures are owned by the Port of Helsinki.

A warehouse dating back to 1960 currently stands on the site. Given the intended future use of this site, the building is no longer fit for purpose, and it has no special architectural or aesthetic value. The building will be demolished, and the materials recycled as far as possible. Alternative premises will be provided to the site's current occupants. To the northwest of the site stand the Allas Sea Pool and Sky Wheel Helsinki, both of which are fixed-term structures.

Katajanokka Harbour forms part of the wider Port of Helsinki Oy. It is a key hub of the Trans-European Transport Network (TEN-T) and offers regular, year-round vehicle and passenger ferry services between Finland, Estonia and Sweden as well as serving international cruise liners that visit on a more seasonal basis.

The harbour side of the building currently acts as a thoroughfare for HGV (Heavy Goods Vehicle, "rekaliikenne" in Finnish) traffic and as a cruise ship port. The waterfront is a restricted ISPS area and protected with a fence.

2.2 Competition objectives and design guidelines

The objective of the competition is to:

- Identify a design solution for a high-profile site in the Finnish capital that is architecturally accomplished in terms its impact on the urban space and landscape, offers a close fit with the surrounding location in terms of function and is capable of serving as the basis for the development of a new local detailed plan. Furthermore, the design must complement Helsinki's historic seafront and iconic skyline, fully address the specific requirements this place on it and sensitively reflect the cultural significance of the site.
- Secure a feasible design option for the new Stora Enso head office and hotel that is characterised by its high standard both in terms of architectural merit and functionality and gives an interpretation of the unique relationship Nordic people have with the forests that surround them
- Identify a flexible structural solution capable of accommodating a range of different uses during the building's lifespan.
- Identify a design that offers an optimal and balanced approach to life cycle management. The solution must be carbon neutral and energy efficient.
- Identify a design solution that is technically and economically feasible.
- Achieve a largely timber-built structure using the Stora Enso massive wood products and office building concept.
- Lead to the appointment of a designer

The project comprises approximately 16,000 sqm. The total floor area will be determined in the local detailed plan. In addition, a maximum of 60 parking spaces will be permitted in the competition area.

A total of 5,500 sqm (+/-10%) will be allocated to the Stora Enso head office. Tenants will be sought for the remaining capacity.





The hotel will be designed for the highest luxury segment (comprising 110–120 rooms) or just below it (comprising 150–160 rooms).

The hotel will feature meeting, restaurant, wellness and reception facilities as well as warehouse and maintenance spaces.

The purpose of the project is to create a new South Harbour Bay-facing urban facade for Helsinki's Katajanokka neighbourhood. Designed to a high architectural specification, the site will have its own distinct sense of identity that draws on the potential offered by this unique location and views towards the harbour and central Helsinki. In terms of height, the building should complement the new seafront facade, offering a visual pedestal for Katajanokka's existing historic roofscape.

With regard to the street level areas and waterfront areas, the design should be appealing to pedestrians. This can be achieved by allocating street level premises for retail or equivalent purposes which are capable of generating footfall and activity in this area. The design and articulation of the building exteriors should facilitate the creation of an attractive pedestrian-only zone in the South Harbour. The aim is to eliminate all HGV traffic from the area between the new development and the seafront. At the competition site, public pedestrian access should be provided between the new development and existing port area. The space previously allocated to HGV traffic could be used to develop an outdoor terrace that connects directly with the building.

2.3 Evaluation criteria

The submissions will be evaluated on the basis of their ability to present a design that offers a balanced solution with regard to the urban structure and the relevant functional, aesthetic, technical and economic considerations. The evaluation process will focus on the design as a whole and the potential it offers for further development. These aspects matter more than the presentation of flawless partial solutions or detailing.

The following criteria will be used to evaluate the submissions:

A. Quality of the design concept with regard to the wider urban landscape

1. The quality of cityscape: the impact on Helsinki's silhouette both in terms of its architecture and landscape and the city facade of Katajanokka
2. Relation of the building to the existing built environment of the South Harbor area, in particular its height relative to the Nationally Valuable Urban Landscape ("kansallismaisema" in Finnish) and the harmonious relation to Genius Loci
3. Solutions that strengthen the area's existing identity and allow it to evolve further
4. The design's ability to establish a dynamic and attractive urban space and to create an open walking environment accessible to all members of the public alongside both indoor and outdoor social gathering places

B. Architectural merit

1. Quality of the external architecture and external milieu
2. Creating an identity for the head office and hotel
3. Architectural design solution and massing in line with intended function
4. The character of the street space and street level provision

C. Functional aspects

1. Functional aspects of the office space
2. Functional aspects of the hotel
3. Functional aspects of the shared spaces
4. Functional merit of the outdoor spaces: direct and effortless pedestrian routes, ensuring active use is made of street level areas, incorporating the pedestrian perspective and successfully integrating car and HGV (Heavy Goods Vehicle, "rekkaliikenne" in Finnish) traffic arrangements as part of a high-quality pedestrian area

D. Technical and financial criteria

1. Feasibility, efficiency and overall value for money
2. Carbon neutrality, energy efficiency and sustainability throughout entire life cycle
3. Innovative use of timber building concept

3. GENERAL COMMENTS

In light of the South Harbour's immense cultural importance for Finland as a whole, designing a building for this site calls for a great deal of skill and insight. The exceptional challenge presented by this culturally and historically unique location is further compounded by the site's maritime climate and structural demands. Given that the brief calls not only for a design that makes use of state-of-the-art wood construction techniques, but the client also currently occupies an iconic building created by Alvar Aalto, the bar could not have been set higher.

As with all architectures, the task of our contemporary architecture is to reach beyond mere quantitative targets to seek to give meaning to the present era, to give expression to our ideals and lend form to higher goals. Architecture engages in this pursuit through projects of all shapes and sizes, from private dwellings to monumental flagship buildings. While architecture remains a symbiotic fusion of construction engineering and art, its ways and means are constrained by materials and our physical reality. In the best proposals, the new development has been woven into the surrounding urban fabric and it forms a seamless extension of the Helsinki empire style seafront. With regard to massing and details, the approach towards the surrounding built environment has been sympathetic and allows the proposals to claim their rightful place as an equal in its setting. The purpose of the new building is to act as a balanced and harmonious extension of the cityscape, with the potential to expand the scope of its functions and to attract residents and visitors alike to the newly created city centre district.

The spaces in which we work are continuing to change, and this has an impact on the expectations we place on our built environment. To avoid endless cycles of demolition and new development, it is imperative to ensure that construction is carried on sustainably and that due respect is shown to the finest contributions made by preceding generations. Investment in quality quantified in terms of each individual building's specific life cycle expectations is needed to deliver functional and structural flexibility. Among the entries received, the most functionally sustainable solutions were based on the sort of adapt-

ability that can be delivered within the constraints of the building's basic structure and frame. Solutions based on high-quality spatial allocations and clear spatial arrangement invariably offered the best starting point for exploring the aesthetic dimension.

All six entries received were of a high quality. That only the most accomplished submissions succeeded in creating a fully-fledged synthesis of architectural expression, functionality, technical accomplishment and adaptability whilst also striking the right tone in terms of the development's relationship with its surrounding cityscape, is testament to the scale of the challenge involved for participants. Further challenges naturally remain, but the most meritorious entries have excelled in achieving the objectives set in the competition brief. The competition was successful and met its goals well.

3.1 Quality of the design concept with regard to the wider urban landscape

In terms of Helsinki's cityscape, the evaluation criteria were designed to explore the proposed developments' impact on the city's urban silhouette and waterfront facade as well as the new urban spaces they set out to create and their relationship with their setting and the existing building stock.

The approaches varied from restrained and understated expression to bold and powerful statements. The designs ranked highest by the jury eschewed extravagant gestures while referencing existing themes and materials to introduce a fresh and distinctive addition to the city.

Weighting was given to the proposals' ability to maintain their appeal over time. In view of the jury, this was particularly commendably achieved by entries that sought to conform to the height, scale, forms and detailing already present in the urban setting. A particular objective for the competition was to define a new architecture for the Katajanokka waterfront. It would ill-advised to introduce something new without developing an understanding of what already exists

and what is already present. It is incumbent upon those introducing new development to this unique area to give expression to its characteristic features. The competition ably demonstrated the importance of upholding the most enduring aspects of the area's architecture, from the soaring serenity and light colours of the buildings flanking Kauppatori Market to the restrained and organic shapes and materials that characterise Katajanokka and the openness of the area's street-facing spaces and the spacious expansiveness of the interiors.

The most exciting aspect of the entries was the new views and sightlines they offer across South Harbour Bay and towards the city centre proper. Other strengths include the way the proposals reinforced the status of existing pedestrian routes while establishing new provision, the way in which the on-street space and the building itself have been negotiated into the existing scale and presence of the surrounding environment as well as the creation of clear open spaces. The proposals successfully fine-tuned these aspects of the design, employing a variety of distinctive approaches to do so. In Beacon, the building's mass at the western end of the site is reduced to create space for a square in front of it, while Spring positions entrance points under a canopy that divides the massing into smaller elements and Rantametsä creates a high atrium opening at street level that is accessible from both sides of the building.

Particular emphasis was based on the relationship established with the adjacent outdoor space, particularly the street and the potential for the raised quayside to be turned into a welcoming and attractive outdoor public space.

3.2 Architectural merit

In considering architectural merit, the jury focused particularly on the buildings' ability to engage in dialogue with their surroundings and the degree of consistency applied to forging an architectural identity for the development on the one hand and negotiating construction engineering constraints and meeting functional requirements on the other.

The ability to articulate an opposite overall concept for the development has been integral to identifying the necessary solutions for it. A readiness to embrace elements both old and new, an openness to borrowed influences and a commitment to developing a comprehensive understanding of the potential offered by wood were all found to be integral to the creation of a balanced synthesis. The most accomplished proposals have succeeded

in elevating wood from a building material to an architectural element in its own right by engaging it in an interplay with other materials whilst retaining its status as the driving force of the design.

To address the large building volumes involved, textural variation has been employed by sub-dividing the elevations into smaller sections or by splitting the building mass into sections through visual interventions. In the most accomplished designs, the commitment to retaining a consistent surface texture for the development and breaking up the massing by function and wider urban structure has led to sculptural results characterised by their sense of dignity and restraint. These designs have employed construction engineering methods and functional solutions to deliver thematic variation. The finest treatments of scale have placed great importance on creating sheltered and inviting local spaces at the boundary of the building interiors and exteriors.

With the head office and hotel subsumed under a single unified identity, they are able to draw strength from one another. The requirement that the spaces offer flexible scope for adaptation in the long term has meant that the proposals stop short of imposing excessive typological restrictions.

3.3 Functional merit

In terms of the building's intended function, ensuring that both the office and hotel facilities are open to adaptation has been key. All proposals were expected to deliver a generic structure capable of offering adaptability across the building's entire lifespan. To deliver such a solution, the participants have had to develop an understanding of the restrictions implicit in the concept and to leverage them as an opportunity. It is only through engagement with this logic, that it is possible to begin the spatial allocations needed.

A flexible and adaptable multi-purpose environment calls for extensive undesignated space. The design for the hotel requires a sufficiently narrow frame and the transmission of natural light to all guest rooms. Defining these main functions on a conceptual level in such a way as to allow either function to expand to encompass almost all of the building has been key to the successful execution of the competition brief. Room for manoeuvre has been provided by the shared spaces, ancillary facilities and outdoor areas that are required to support the building's main functions.

The participants have all taken a largely similar approach where the hotel's guest rooms design-

nated to run along the external-facing elevations or wrapped around both heated and unheated courtyard spaces. However, the jury considers that only the winning entry has succeeded in identifying a layout solution that meets the specifications for both the head office and the hotel and allows them to be adapted without significant structural alterations or remedial works. However, here too further development will be required.

When constructing an adaptable building, it is important to ensure investment in the following: generic solutions, sufficient ceiling heights, open-plan interiors and structural arrangements that allow for the retrospective addition of further openings. These features allow the building to flexibly respond to any changes of use during its lifecycle.

3.4 Technical and financial merit

In the course of its deliberations, the jury consulted experts across a number of different disciplines. From their own specialist vantage points, they have carried out evaluations of the proposals' technical and financial implications. During the evaluation process, the jury chose to request a more detailed technical and financial evaluation. Its remit encompassed Beacon, Rantametsä and Spring, the three highest ranked entries. The results do not lend themselves to be combined into a single design, but they have lent significant support to the jury during the decision-making process.

The ecological benefits of wood construction have been demonstrated quantitatively. All the entries received have a large carbon handprint due to the significant carbon stocks the wood structures contain. In terms of their environmental impact, the structural solutions chosen by the participants have low carbon emissions with moderate carbon footprints. The proposals incorporating large glazed elevations are associated with higher emissions. Both open and closed rib panels as floor elements are associated with larger carbon emissions than massive timber panels on floors, and the carbon stocks are smaller due to the smaller volume of loadbearing timber. This is apparent upon comparative assessment.

All participants have studied the building's constituent elements in significant detail. On the whole, structural solutions have been presented in detail. There is significant variation in the participants' approach to the wood construction system, but across all the proposals it has been applied with a great deal of professional skill. Some of the entries

have identified a range of ideas for further development, both in terms of sustainable construction in general and the building's structure in particular. Others have adopted the Office Building Concept by Stora Enso with little modification.

To assess the efficiency of the solutions proposed and the overall economy presented by the designs, volume calculations were carried out of the highest-ranking proposals and the results compared with those set out in the competition programme. Due to the level of detail provided in the proposals, the volume calculations took account of the impact building services facilities would have on eventual volumes. This was done to allow like-for-like comparisons to be made. In addition to these calculations, further parity was sought with regard to spatial and surface structures and building services, which will be more closely defined during later stages. All load bearing structures comparison baseline against the fire resistance requirement were assessed as level R60.

The calculations revealed that Rantametsä exceeded the target volume set in the competition programme, while Spring matched it and Beacon was below it. Beacon does not meet the target volume due to a more modest net floor area, while Rantametsä exceeds this and Spring matches it. As the development moves to the next phase, the basement, transport, conference and foyer spaces across all the entries should be developed further as part of an overall cost-efficiency exercise and the proportion of total volume allocated to office space and hotel rooms should be increased.

Haahtela's Kustannustieto TAKU 2020 cost estimation software was used to calculate a target cost for each proposal. The exercise showed that the cost associated with all entries exceed the benchmark for a high-specification commercial building. The costs are due to the prevailing conditions on site, spatial efficiencies that fail to match those set out in the space allocation scheme and the expensive construction solutions adopted. The solutions require further development to ensure financial feasibility while retaining the values that underpin the design brief.

4. EVALUATION



4.1 Beacon

Beacon offers a clear and simple urban design solution for Helsinki. A new city square and meeting place at the end of Satamakatu creates space at the head offices' main entrance to accommodate a new row of development. This gesture retains uninterrupted sightlines from Tove Jansson Park towards Kaivopuisto Park and from Katajanokanlaituri towards the South Harbour, reinforcing the area's pedestrian character and the links between the two sides of the harbour. Beacon's massing is shorter than in the other entries, and it offers an excellent fit with the surrounding environment. The clear form and treatment of the facade succeed in highlighting the area's empire character without imposing itself on the cityscape.

The sun protection features located between the double-skin facade link the building with the architectural heritage of the port warehousing. The sunken roof deck on the seaward side provides shelter to the roof terrace. The gesture is a calm yet modest addition to the cityscape, and implementation will present structural challenges. The street-level spaces provide well thought-out links to the surrounding environment and the positioning of the entrances is carefully considered. Characterised by its attention to detail, the entry has embraced the architectural potential offered by wood construction. The inclusion of contrasting elements and colours, both indoors and against the visually striking brick backdrop of the existing buildings in Kataja-

nokka would allow the design to assert itself more powerfully. The building has a significant degree of wooden features, and the overall appearance would benefit from the addition of more neutral surfaces.

The layout is clearly designed. The design allows for easy orientation thanks to the spacious atrium. As a central feature and Stora Enso showcase it offers excellent links with the spaces on the lower floor. The atrium is capable of accommodating public events at the Kauppatori Market end and acts as a thoroughfare integrated into the city's wider pedestrian route map. The decision to locate the entrance to the Stora Enso head office at the Kauppatori Market end and the hotel entrance at Katajanokanlaituri allows for smooth flows of human traffic inside the building. The steps and seating areas indicated for the seafront encourage non-commercial enjoyment of this space and create an entirely new style of public realm for South Harbour Bay.

The systematic frame structure and harmonious modulation allow for functional adaptability between the hotel and office typologies throughout the building's lifecycle, but the narrow frame limits the opportunities for internal reconfiguration of the multifunctional space. The ramp providing vehicular access to the basement level is notably short, and the kitchen has been located in a decidedly public area. Sufficient root space to accommodate the forest has been set aside at basement level, and this will also act as a run-off management system.

The solutions put forward in this entry are carefully thought through, economically astute and clearly reflect an extremely high degree of professional expertise. It remains to be considered to what extent fire protection solutions would alter the interior aesthetic. It should also be noted that the addition of more light-coloured surfaces could give a lift to the interiors. The ceiling heights are at the lower end of what is feasible to implement. However, due to the shallow depth of the frame, this does not lend an oppressive feel to the offices. The proposed innovative intermediate flooring solution combines beams with closed rib panels and will require significant additional planning, particular with regard to the transmission of column loads through the LVL beams. The dimensioning for the closed rib panels must be revisited. The number of reinforcing elements is sufficient, but they must be extended to the basement. The detailed implementation of the undulating roof slab will be difficult and in terms of maintenance, it presents a significant building engineering challenge. The technical and func-

tional solutions support one another. A good example of this is the forest which offers enhanced amenity indoors whilst also offering opportunities for runoff management.

The smaller than envisaged net floor area undermines Beacon's financial feasibility, as it means, for example, that the expensive foundations would be used to support a smaller building. There a number of high-cost elements and the foyer and the external walls of the indoor forest feature significant expanses of fire-resistant glass.

This is a carefully conceived and thoughtfully argued entry. The warmth of the wood and tectonic character of the proposed structure come into their own in the building's interior, although the overall impression leaves the viewer wishing for the sort of contrasts that could be created through the use of other materials and neutral surfaces. Overall, this is a highly professional submission that deftly showcases the team's skills.



4.2 JUURET

The elongated polygon shape seen in Juuret is typical of residential blocks in Katajanokka. The structure, bisected along its long axis by an inner courtyard garden is a very strong concept that reflects other similar structures nearby effectively cut in half by the harbour rail line along with the functional potential they offer. The presence of a real forest on the land between two paradigms lends an additional richness to the concept thanks to its ability to provide passers-by with a unforgettable experience.

The design creates a number of facades and identities, the inspiration for which is always drawn from the immediate surroundings. The seaward façade of

the head office contains strong thematic elements which, made of wood, repeat the arched motifs found on the Tulli- ja pakkahuone (Customs and warehouse) building. The seafront façade with its balconies is more neutral in character and will not rise to the level required by the South Harbor Bay National Landscape.

The open entrances to the forest space at either end are a technical feature and represent a total departure from the previous. They divide the side facades into several distinct sections. This division into a series of aesthetically diverse facades makes it more difficult to maintain a cohesive concept for the wider cityscape. Strongly divergent architectural thematics strip the building of its impact. In

bringing them together, the team have not succeeded in creating a harmonious and consistent result or to add to the cohesion of the cityscape.

The ground floor interiors have significant window openings which allow it to connect with the street space outside. The forest running across the length of the building has undeniable appeal but the parallel route it affords between Katajanokka Harbour and Kauppatori Market may not be necessary. As a public interior, the full-length space in itself contributes to a strong concept. The office and hotel facilities operate independently of one another, but the forest between them invites exploration to identify the possibilities offered by their synergies and adaptabilities. For the building to accommodate alternative uses, greater harmonies would need to be sought as part of an overall concept. The decision to locate the hotel exclusively on the seafront means that the offices are denied access to the maritime views. The ramp providing vehicular access has been placed in the middle of Ankkurikatu in contravention of the brief, acting as a barrier to ongoing development of the streetscape and to traffic exiting from the ships moored nearby.

The flexibly conceived floor spaces have set out to offer an ideal solution but are not fit for purpose due their structural characteristics. In practice, shorter spans will be required to manage structural vibration. The proposed ceiling heights are too low, and the floor area exceeds the limits set out in the competition programme. The proposal comprises one excess floor with insufficient ceiling height. The terraces at roof level expand the scope of functional opportunities on offer. Growing a forest in a shallow trough-like growing space is technically untenable and financially unfeasible.

The proposal comprises excellent constituent parts and a strong overall concept but fails to bring them together to create a cohesive whole. The subtle detailing used to create links between the interiors and the building's structure is the proposal's greatest asset and they are testament to the architect's professional expertise. The potency architecture draws from abstraction is not put to use across several themes, but this could have been resolved by making clear choices with regard to architectural and structural themes.



4.3 Rantametsä

Rantametsä is at once powerful and delicate in its character. Like an architectural transparency, the proposal establishes a unique identity for the building that demands to be noticed by those surrounding it. It is elegantly and unshowily divided into a series of interlocking polygonal shapes that are arranged symmetrically on the central axis in

line with the neighbouring buildings in Katajanokka. Due to the vertical features, the boundaries between the constituent parts are blurred in an interesting and exciting way. The identity generated by the treatment given to the building's surface structure recalls public buildings, such as museums and libraries. The solution presented exceeds the permitted construction height and suggested floor area. A lower build would have proved a more

ideal fit with the surrounding environment. The ground floor interiors create excellent links with the streetscape, forming an attractive and welcoming urban setting at this level. In line with the commitment to symmetry, the main entrances are located on the central axel. This achieves functional synergies with the Tulli- ja Pakkahuone building.

In the exterior visualisation, the building is warmly lit creating a welcoming atmosphere. The interior spaces are of a high standard throughout. The shared foyer intended for the hotel, head office and all public functions contained within the building, is beautiful and skilfully executed. The natural light emanating from the ceiling is reflected by the glass walls and vertically oriented texture of the wood, lending a lyrical feel to the space, although it comes across as less warm than the exterior visualisation suggests. The sculptural boxed composition given to the conference facilities is distinctive and despite the structural challenges involved lends itself to implementation. In the offices, the light-coloured ceilings provide a serene contrast to the wood surfaces. Viewed from a distance, the facade detailing looks dense and thin, but in reality, would not interrupt the views from indoors out. The interplay of solid wood and glass features on the building envelope are in line with the overall impact.

The facilities on the ground floor give pleasant access to the outdoors, with the exception of the eastern end of the building which is closed off. The entrance has excellent and convenient links to other parts of the building. The functions have been split, with the offices located on the Kauppatori Market side and the hotel occupying the remaining parts of the eastern half. The decision-making here is well justified. Despite the calm feeling that prevails, the upper floors have clearly been designed with efficient and effective working in mind. The spatial allocations are well balanced, and the floors lend themselves to flexible subdivision.

The column and beam frame and rib panels are an effective construction method and they offer a great degree of adaptability. However, changing the building's use from an office to a hotel or vice versa will not be possible without structural alterations to the intermediate floors. The ceiling heights are at the lower end of what is feasible to implement. The spatial experience fails to feature sufficient height, especially in the heart of the extensive office floor. It would have been possible to eliminate one floor from the proposal and to use that opportunity to increase the ceiling height. The proposed technical and structural solutions are underpinned by realism and largely based on existing technologies. The narrow composite louvres used on the facades required further development. The seafront location presents a significant challenge to these louvres due to the effects of weather exposure involved and the risk of wind-induced vibration. Details on load-bearing column between the basement and ground floor are absent. In practical terms, it will not be possible to situate the gym on the top floor due to issues with acoustics and vibration. Further development is required for the exits and structure associated with central boxed composition.

Significant expense appears to be associated with the proposed space allocations. High-cost design elements include the large foyer and the terrace and meeting rooms. This entry has the most extensive glass roof structures, and it calls for the largest volume of fire-protected glass. The nine lifts exceed the provision in other entries.

This is a skilful proposal created with a great degree of professionalism that is impressive in its simplicity. The design is well suited for the waterfront location, although the surface articulation lends it an excessively public building-like feel. The proposed shape seems slightly oversized for the site. The interiors are some of the finest among the competition entries, but it has not been possible to deliver the requested adaptability without structural changes during the building's lifespan.

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4.4 SPRING

Spring offers an aesthetically appealing and well-balanced solution that employs contemporary architectural methods to deliver a continuation of the long line of light-coloured urban buildings extending all the way from Esplanadi to Katajanokka. A series of seemingly straightforward yet insightful gestures allow it to harmoniously take its place among the existing building stock and the waterfront elevations. At the far end of Kauppatori Market, a small urban park at the top of Satamakatu pivots towards the seafront terrace, where restaurant and cafe facilities activate the area which is the most important urban public space on the site. The height transition from street to terrace is beautifully articulated. The way the interiors open up into the street space can be revisited at a later stage.

The indentations in the undulating facade mark the location of the entrances beautifully, while dividing the building into smaller distinct parts. This allows the building sit well within its context. The softly rounded corners, shapes very much in evidence elsewhere among Katajanokka's National Romantic and Art Nouveau era architecture, also reference the nearby Tulli- and pakkahuone building.

The building's substantial columns support a natural stone overhang, which is topped by a more delicate series of vertical mullions. In its simplicity this solution supports the facade's occasionally curvilinear form. A conscious decision has been made to situate these softly flowing lines in the building's corners and at break points. They support the positioning of the different functions within the building and create open and meaningful views from the interiors towards the city across the terraces running in parallel with the billowing facades.

The landmark buildings are framed in these views, blending them in as part of the indoor experience. Here, architecture has the power to bring the city into the building and turning into an integral feature of its very structure. Recycled aluminium and natural stone have been proposed as materials for the vertical features. As a more sustainable choice, natural stone has also been used as a building material elsewhere in the area. The addition of light-coloured shaped brick detailing could also allow the building to reinforce its links with Katajanokka's brick architecture.

The architecture has a pleasingly familiar feel. The shapes reflect the modern Nordic architectural heritage. Despite the sympathetic references to modern Nordic architecture, the building has succeeded in retaining its individual character. It uses the natural resource of the timber structure to interpret humans' love of nature. The wooden surfaces can be viewed from outside of the building depending on the lighting conditions. It is envisaged that the visual transformation as day turns to evening and the ambient light shifts will highlight the building's wooden elements both externally and internally. Internally, the untreated wooden surfaces create a truly holistic spatial experience. The massive wooden elements are well-justified aspect of the building's architecture and allow it to achieve a significant degree of fire resistance. The central foyer and office spaces with skylights are simply breath-taking and might do well without the presence of stairs as part of the views. The stairs are associated with structural and cost challenges but are an indispensable part of the design and could be found alternative locations elsewhere within the frame. The small garden in the hotel's inner courtyard is beautiful but requires a root space that connects directly to the ground below. In future, more attention should be given to how func-

tional use can be made of the roof to make the most of the stunning sea views and access arrangements reviewed as part of next steps.

The shape of the building is informed by the decision to locate the functions within the scope of the frame. A foyer that acts as a public thoroughfare will add a highly significant new architectural interior to Helsinki. It greets visitors with a sense of openness and facilitates onward journeys to other parts of the building. The reception area's simple design means that it is ideally suited as a backdrop for many different uses from informal parties to exhibitions.

The office facilities are appropriately located on the Kauppatori Market side, with the hotel to the east. The vast frame is ideally suited for housing a variety of different functions. The skylight allows the necessary natural light to flood into the centre of the building. In terms of adaptability, the hotel would be better served by a column, beam and slab structure than the load-bearing internal walls suggested here. The load-bearing CLT walls have the effect of forcing a non-open play layout on any eventual office space and thus fails to facilitate the creation of a multifunctional working environment. The office zone, on the other hand, requires the addition of further exits if even sections of it are to be converted into a hotel in the future.

On the seafront, the proposed solutions at street level support the creation of an attractive and welcoming new public space. The open aspect of the ground floor spaces has been highlighted by separating them from the enclosed meeting spaces through the addition of a public zone. The treatment of the waterfront is characterised by restraint. The focus here is on facilitating links with the sea. The treatment of the waterfront creates opportunities for this public area to be developed further.

Internally, the ceiling height is sufficient to create a feeling of spaciousness, even in the centre of the frame. It allows flexibility with regard to typologies and allocates sufficient height to accommodate building services and structural features.

The frame is based on a massive wood structure. The spans are within safe range, but more detail is needed on structural continuity with the foundations. The roof structure of the basement is given as a load transfer structure. This necessitates a greater height to be allocated to the intermediate floor

and would be challenging to implement both in terms of technical constraints and end user requirements. The jury recommends that consideration is given to extending the load bearing structures to the basement. Careful additional consideration will also need to be given to the spatial and structural solutions in respect of the basement. The decision to locate the kitchen at the western end of the building is well justified in terms of the restaurant facilities but requires decisions to be made with regard to the basement and the hotel. Additional bracing structures are required from the second level upwards at the western end of the building.

The carbon footprint is the smallest among the entries, though the variation is small. The CLT floor panels based on a massive wood structure stands out due to the lower emissions and greater carbon stocks it offers. The natural stone slabs indicated for the front elevation are associated with moderate emissions. However, if these are substituted for aluminium, the emissions would increase significantly.

With regard to the hotel portion of the building, the financial feasibility assessment carried out on this entry was based on the same column slab system adopted for the office portion to ensure adaptability in line with the competition brief and to facilitate a standardised evaluation process. In order for the design to offer better overall economy, the building component solutions must be developed, and spatial efficiencies sought while parking, maintenance and building services facilities are allocated. In order for this entry to be suitable for implementation, significant expanses of fire-resistant glass will be required for the foyer and the external walls of the indoor forest.

Spring offers a holistic treatment of the design brief and is deemed the most accomplished submission. It offers excellent potential for further development in line with competition objectives and makes inventive use of the architectural means at its disposal to combine construction engineering and art to present a beautifully natural and site-appropriate solution. Upon examining the presentation, viewers will continually discover new attractive details that support the architectural and functional narrative and persuasively make the case for the design's merit. Beautiful and distinctive, the proposal links in with the modern Nordic architectural heritage, demonstrating how contemporary wood construction techniques can be used to underpin more sustainable urban development.



4.5 uusi aalto

Uusi aalto stands out from the thematic restraint that characterise its surrounding built environment with powerful form and massing. Although the eaves are horizontal, from a pedestrian's perspective they appear to be rising due to the offsetting used here. The bifurcated columns further accentuate the effect. This sort of eye-catching design is usually reserved for public buildings, which are located in parks and on open sites. The building creates associations with Helsinki's Finlandia Hall, not just due to its shape but also its overall facade composition. The sincerely held objective of the design here is to create open views from the interior to the surrounding areas in alignment with the facades and to make new spaces in its immediate vicinity while generating a distinct identity for the project.

The proposal puts forward bold curvilinear shapes and facets that help the design to stand out from its surroundings. This effect is further accentuated by the design's extensive use of wood externally. The building would be a more ideal fit in a large park or natural setting, where its shape could fully assert itself and it would be complemented by wide-open views, natural trees and even a horizontally undulating mountain range. This is also supported by the wedge-shaped foyer that would be ideal for viewing snow-capped peaks and steep valleys. The seafront setting is also suitable for the building's purpose, but in order for it to settle into the urban structure a greater degree of consistency with the surrounding aesthetic is required.

At the waterfront, the strongly articulated massing design creates public square-like spaces that offer a series of opportunities to make functional use of

the land and the open views. The placement of the street level functions is largely successful, and it delivers an accomplished degree of openness, making excellent use of the highly attractive terraces at the waterfront.

Ideally, the offices too would benefit from views across to the harbour, but under the current arrangements the entire waterfront-facing facade is allocated to the hotel. The jury acknowledges that these functions could be situated elsewhere, and the design offers a great degree of adaptability. However, the frame does not allow for the creation of a large-scale multifunctional workspace. This is prevented by the presence of the vertical and utility spaces located between curvilinear frame structures. The same vertical connections, i.e. stairs and lifts, are to be used by both office and hotel users, which will present a practical challenge in terms of access control. In contrast with the other entries received, uusi aalto does not provide a shared unifying space. The overall form forces individual spaces within the building to conform to the mould provided by the envelope. In fact, the form would be better suited as a hotel than a commercial building.

The ceiling heights are sufficient, and they work well with the structural arrangements and the spatial allocations required for technical building services. The span is adequate and the structure on the upper floors offers adaptability, but the overall form poses a challenge for the street level interiors and basement by imposing structural elements in the middle of functional spaces. Given the site's marine climate, the jury is not persuaded that the extensive use of wood as part of the seafront facing elevation is a sustainable solution.

On a conceptual level, the proposal has made a bold choice in relation to the site, which has not been addressed during the detailed design phase. The proposal deserves recognition for the comprehensive thematic treatment

given to the form, although this does present a challenge with regard to adaptability. The detailed designs speak volumes about the professional skill that has underpins it.



4.6 ZANDER

The polygonal form that defines the proposal over all features graded articulation and projecting windows. The offices have been located at the Kaupatori Market end of the building, while the hotel looks outwards, occupying three quarters of the building's eastern end. The fundamental concept is clearly expressed and functional. The indented entrances serve to highlight access points to the office and hotel. The projecting windows break up the building's vast presence, dividing the exterior into sections by floor. The chosen form serves to connect the building with the rough-hewn aesthetic of the nearby port and warehouse buildings. The articulation of the roof terrace handrail takes its cue from the window design. Overall, the design is reminiscent of an ocean liner. It contrasts with the Palace building on the opposite side of the bay. Here too the designers drew inspiration from seafaring influences. The evolution in ship design means that, while the scale of the Palace building still surpassed the seagoers it drew its inspiration from, this contemporary building is now set to be dwarfed by the largest vessels docking at the harbour.

The external appearance is defined by the wood composites used, and the angled features are glazed. This angulated texture serves to connect

the building with its wider Katajanokka setting and references the glimmering sea just beyond. However, due to the glazed surfaces, it stands apart from the Katajanokka milieu largely built using natural materials. It is challenging to see how these quirky elevations might connect with the new developments due to be built on the expanding Katajanokka quayside.

The entrances are well placed. The terrace adjacent to the seaward facing entrance is successfully incorporated into its setting. On the seaward side further provision has been made for a kiosk and cafe that makes use of the location. The division of the exterior spaces on the seaward side into a lower pedestrian pathway and an elevated terrace serves to create an excessively private and exclusive feel on a seafront that's intended for public access.

The staircase ascending from the conference space foyer is a visually striking element. The atrium adds light and amenity, enriching the functionality of the spaces here. According to the illustration provided, the interiors continue the exterior colour scheme. The office spaces are clearly laid out and facilitate the formation of floor-specific multifunctional workspaces. In the centre of the building, the office premises interlink with the hotel rooms and it is felt that in this area they may suffer from a lack of

natural light. The spatial concept facilitates adaptability to an extent. There is scope for the office to be expanded into a multifunctional workspace to the west of this extended height space, but the eastern end allows for non-open plan use only. The location of the auditorium and the presence of a feature staircase has prevented the team from facilitating more open-ended use of the space, particularly at ground level. This is apparent when Zander is contrasted with proposals that have succeeded in delivering adaptability without compromising functional linkages between the interior spaces.

The frame is of an adequate scale and the ceiling heights are sufficient. The double skin facade

counteracts ship noise and offers protection from weather effects.

The proposal is characterised by its systematic approach to the brief and the professionalism with which it has been executed. It employs bold gestures in pursuit of impact, but these remain at odds with the building's setting. The form remains two-dimensional and the wood composite used behind the glazed elevations serve to lend an artificial appearance to the facade. Along with the other entries, Zander reflects the high quality that characterised this design competition.

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5. COMPETITION RESULT AND NEXT STEPS

5.1 Competition outcome

In a unanimous decision, the jury has chosen SPRING as the winning entry and awarded honourable mentions to Beacon and Rantametsä. The remaining entries were not ranked.

5.2 Jury recommendations for next steps

The jury recommends that the site subject to the competition continues to be developed on the basis of SPRING. The jury proposes that the architectural practice responsible for this entry be commissioned to develop the design for this site.

5.3 Online public vote

To coincide with the jury's deliberations, the proposals were made available to the public at www.katajanokanlaituri.fi.

They were asked the following question: "In your view, which of the proposals represents leading expertise in wood construction? Please provide the reasons for your choice. We thank you for your engagement!"

As at 15 June 2020, the most popular proposals were:

- JUURET, 467 votes
- SRING, 325 votes
- uusi aalto, 290 votes

5.4 Signatories to the Jury report

Helsinki, June 17, 2020, signatures on the last page.

5.5 Unsealing of the participant envelopes

The envelopes were unsealed following the signing of the jury report and the authors of the proposals were identified.

First prize

”SPRING”

Copyright holders:

Anttinen Oiva
arkkitehdit

- Selina Anttinen ja
Vesa Oiva

Competition team:

Anttinen Oiva
arkkitehdit Oy

- Selina Anttinen
- Vesa Oiva
- Teemu Halme
- Lauri Virkola
- Tomi Itäniemi
- Annamari Vesamo
- Anni Nokkonen
- Saara Linden
- Jaakko Viertiö
- Jussi Kalliopuska

Nomaji:

- Varpu Mikola

Sweco:

- Antti Vilen
- Maija Tiainen

Granlund:

- Jari Hotakainen
- Ulla Nykter

A—insinöörit:

- Mikko Kylliäinen

Wood expert:

- Janne Manninen

Sitowise:

- Seppo Karppinen

Lyrics:

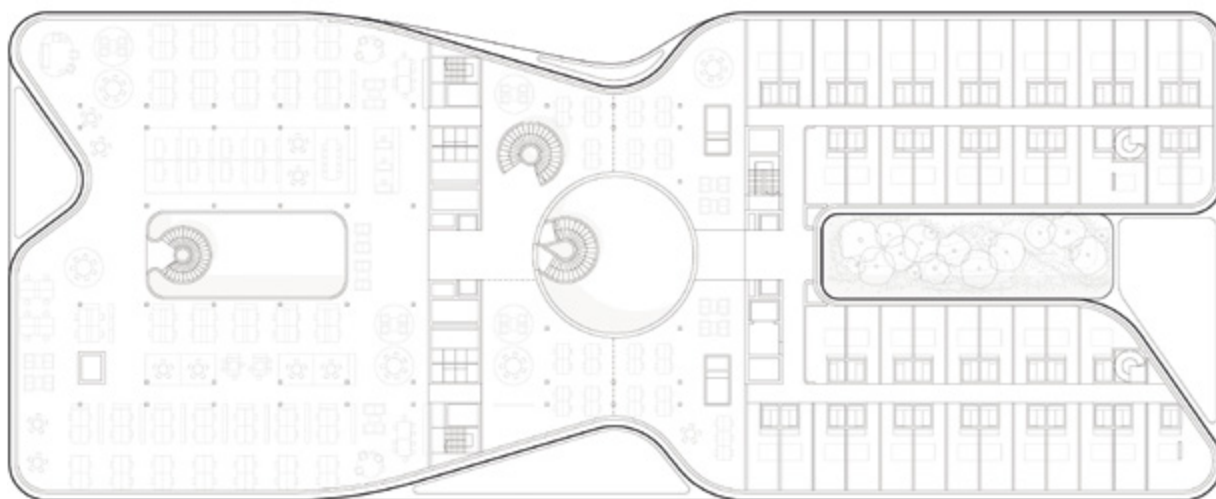
- Markus
Lähteenmäki

Model

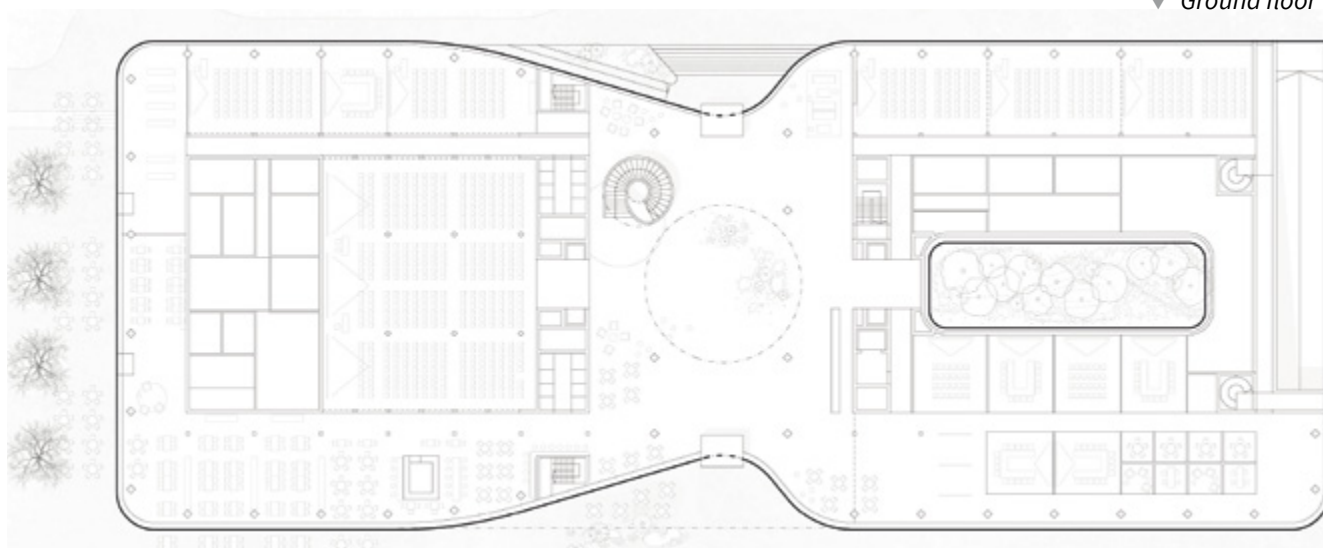
- Klaus Stolt





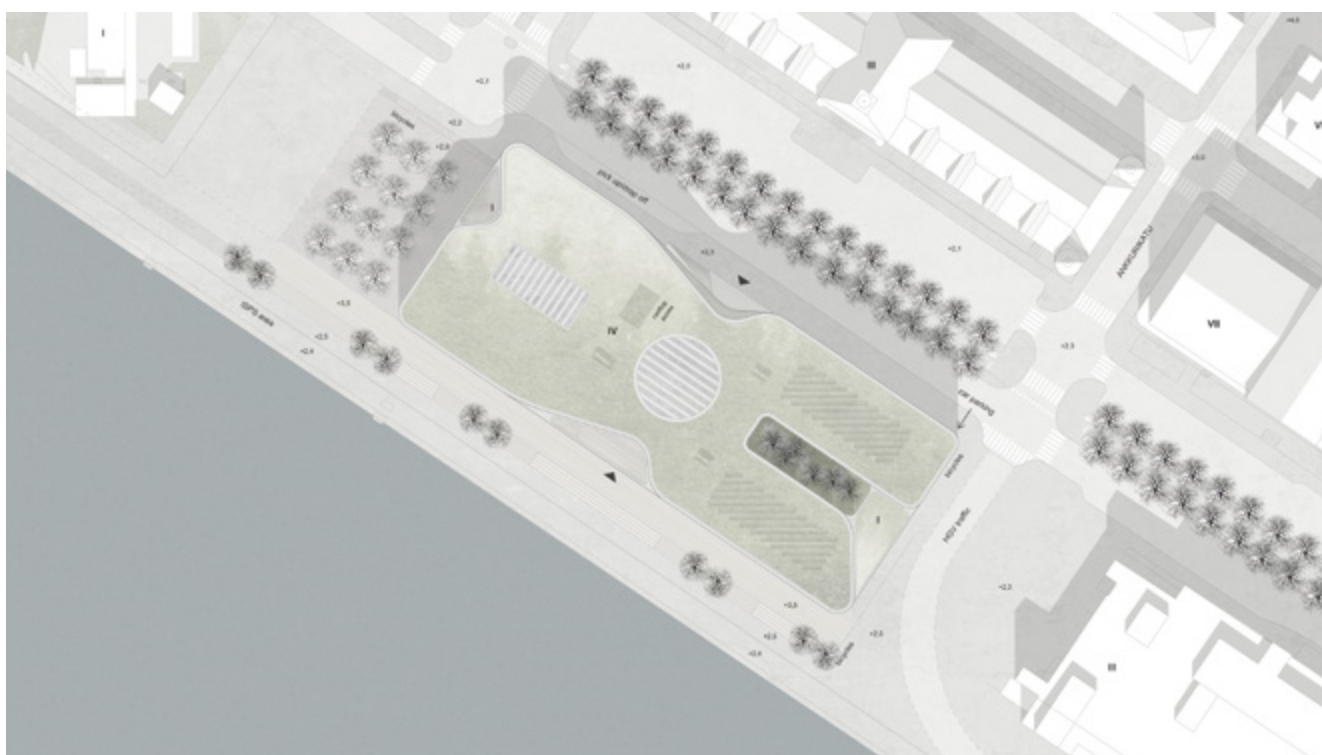
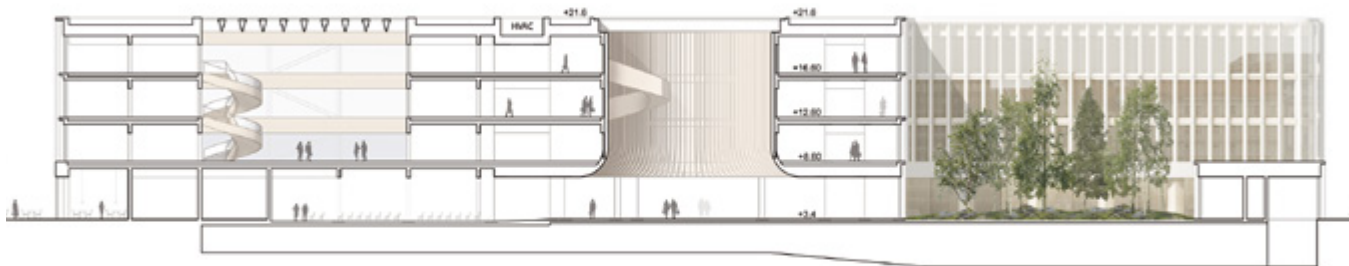


▲ *Third Floor*



▼ *Ground floor*





Honorary mention

”Rantametsä”

Competition team:

PES-Architects

(PES-Arkkitehdit Oy)

- Tuomas Silvennoinen, architect SAFA
- Willem Barendregt, architect
- Simon Richardus, architect
- Sami Lauritsalo, architect
- Kai Lindvall, designer
- Emanuel Lopes, architect

Assisting designers:

- Margarita Vodneva, architect
- Fabiola Liffländer, interior architect
- Brian Watts, architect
- Aino Silvennoinen, office assistant

Collecting ideas team:

- Irene Hinttala, architect SAFA
- Janne Kähkönen, grad. architect
- Lennart Lang, architect SAFA
- Pekka Mäkelä, architect
- Jouni Rekola, architect SAFA

- Okko Vaara, grad. architect
- Ville Ylönen, architect SAFA

Structural engineering:

- Juha Valjus, Sweco, rakennetekniikka Oy,
- Lauri Lepikonmäki, Sweco rakennetekniikka Oy

Mechanical, electric and energy engineering:

- Jukka Tyni (mechanical), Granlund Oy
- Erja Reinikainen, (energy), Granlund Oy
- Topi Volama, (electric), Granlund Oy

Wood specialist:

- Kimmo Lylykangas, professor, architect SAFA

Lighting consultant:

- Jari Vuorinen, LDC Oy

3D images:

- Aesthetica, Barcelona PES-Architects

Model:

- Jaakko Heliövaara

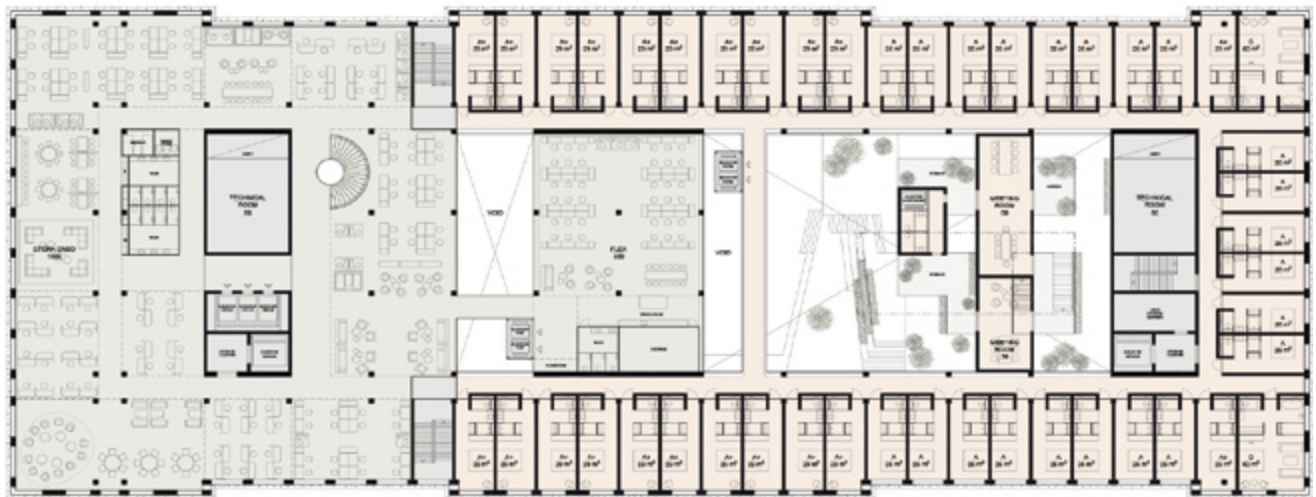
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- PES-Arkkitehdit Oy/
Tuomas Silvennoinen





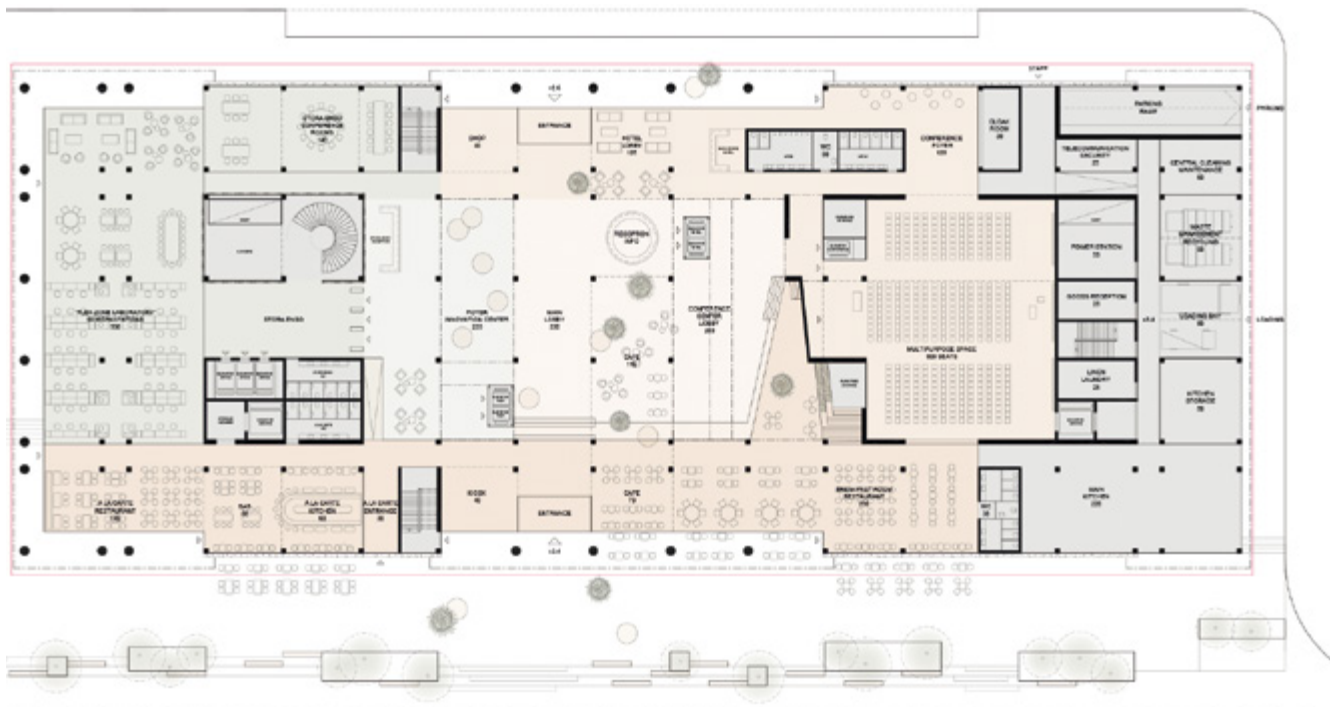




STORA ENSO OFFICE
115 WORKSTATIONS
1470 m² GLA

FLEX-ZONE
36 WORKSTATIONS
330 m² GLA

HOTEL SMART LUXURY
TYPE A/A+ 44 ROOMS
TYPE C 2 ROOMS
TOTAL 46 ROOMS



Honorary mention

”Beacon”

White arkitekter:

- Robert Schmitz and Oskar Norelius
- Filip Sudo/sky, Elsa Sjöblom, Erik Kihlström, Britta Holmblad, Marja Lundgren,
- Viktor Sjögren, Rickard Nygren, Isabel Viljar, Nicholas Baker, Maha Shalaby

Structural Engineers:

- D/FK AS through
- Florian Kosche, Ugo Ribeiro

Technical Consultants:

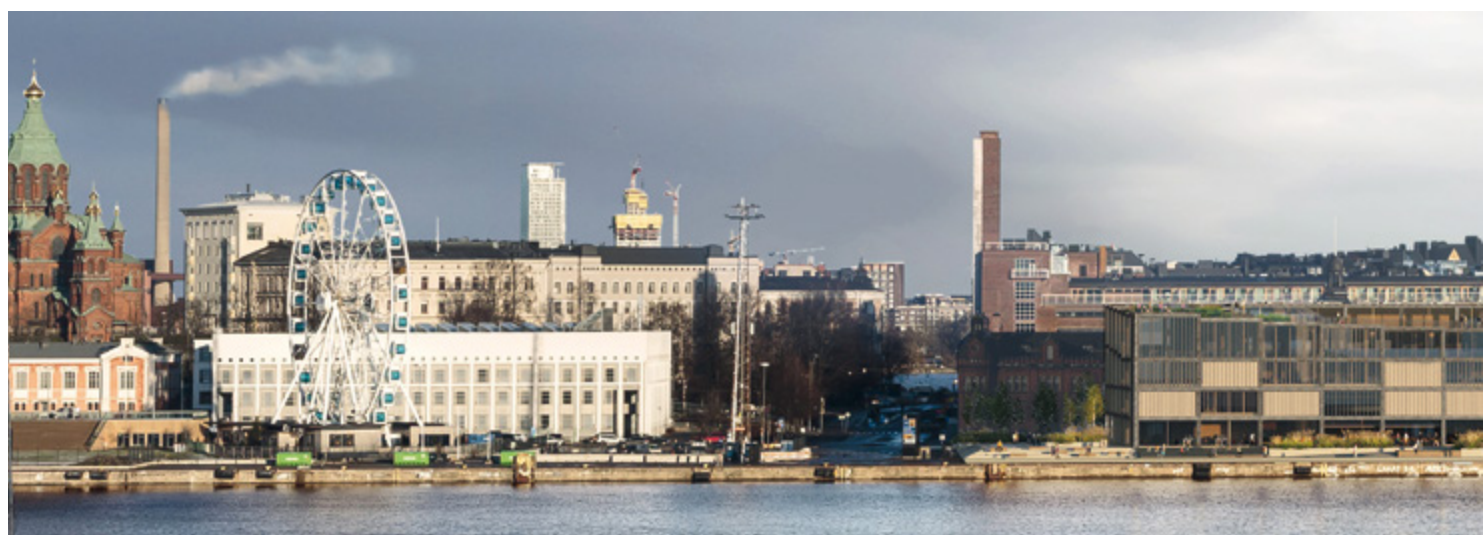
- Incooro
- Martin Bengtsson

Copyright holders:

- White arkitekter AB







Other proposal

”JUURET”

Name of designer and his practice:

- Shigeru Ban, Shigeru Ban Architects

Local architects and Specialists:

- Local Architect
- Pentti Kareoja, ARK – house,
- Rainer Mahlamäki, Lahdelma & Mahlamäki architects
- Jukka Savolainen, Lahdelma & Mahlamäki architects

Timber Specialist:

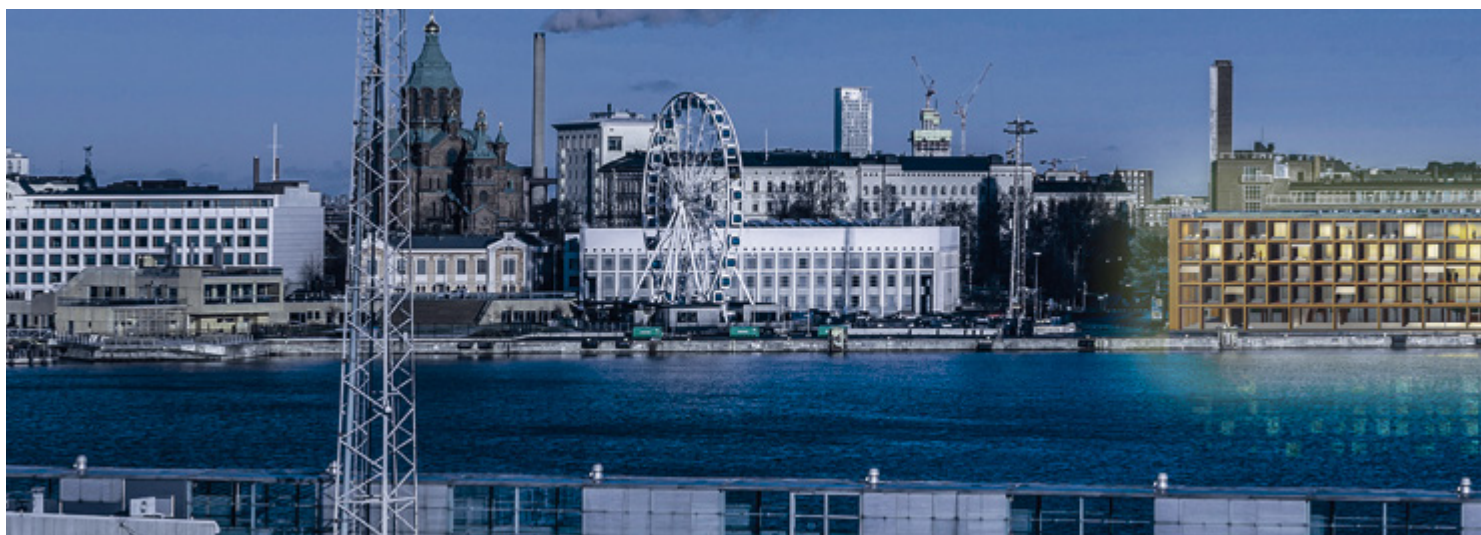
- Hermann Blumer, Création Holz sblumer ZT GmbH
- Samuel Blumer, Création Holz sblumer ZT GmbH

Name of copyright holder:

- Shigeru Ban









Other proposal

”uusi aalto”

Snøhetta:

- Kjetil Thorsen, Rikard Jaucis, Elin Vatn, Thea Kvamme Hartmann
- Robbie Budge, Ejnar Mortensen, Johanne Djernes (Dstergaard)

Bollinger -Grohman Ingenieure:

- Matthias Stracke
- Flemming Hojbjerre SDrensen

Artist:

- Anders Tomren

Copyright holders:

- Snøhetta

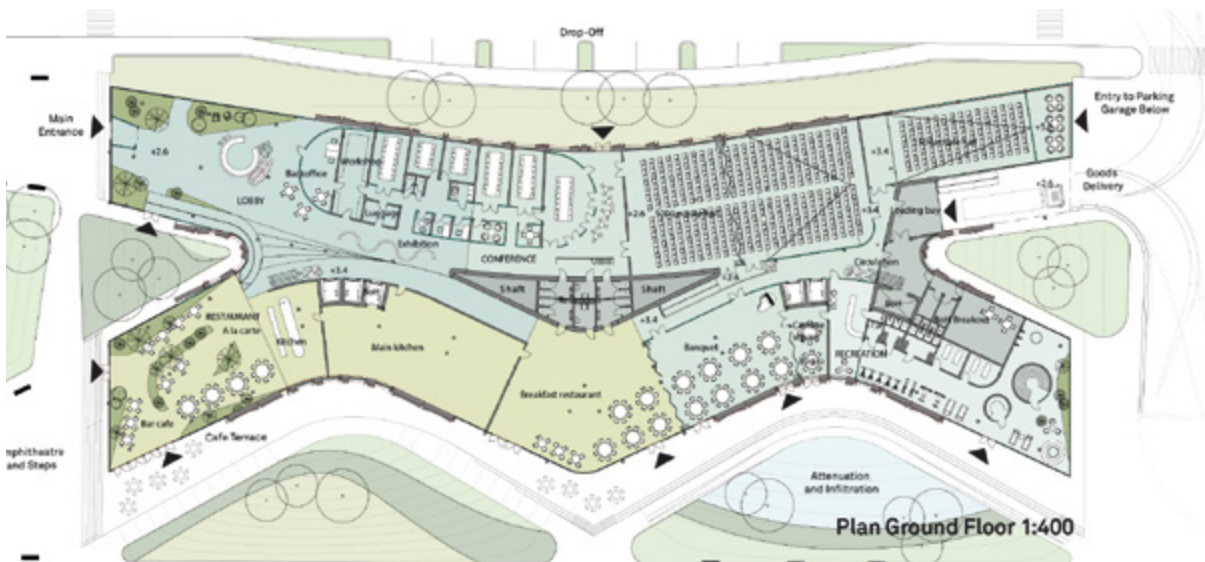








Plan 3rd Floor 1:400



Plan Ground Floor 1:400



Other proposal

”ZANDER”

Designer: ALA Architects:

- Juho Grönholm, Architect M.Sc. SAFA, Partner
- Antti Nousjoki, Architect M.Sc. SAFA, Partner
- Samuli Woolston, Architect M.Sc. SAFA, Partner

Assisted by: ALA Architects:

- Filippo Dozzi, Architect M.Sc.
- David Gallo, Architectural Designer, B.Arch.
- Rafael Gutiérrez Moreno, Architect M.Sc.
- Virve Kaartoluoma, Architect M.Sc. SAFA
- Lotta Kindberg, Architect M.Sc. SAFA
- Thomas Miyauchi, Concept Designer

Engineering-consultancy:

Genpro Solutions

- Juha Siegborg, Structures Inspection Specialist, M.Sc.

Sitowise

- Nicholas Stewart, Energy-and Life Cycle Assessment Specialist, M.Sc.
- Marko Tulamo, Energy and Life Cycle Assessment Specialist, M.Sc.

Visualization:

ArtefactoryLab

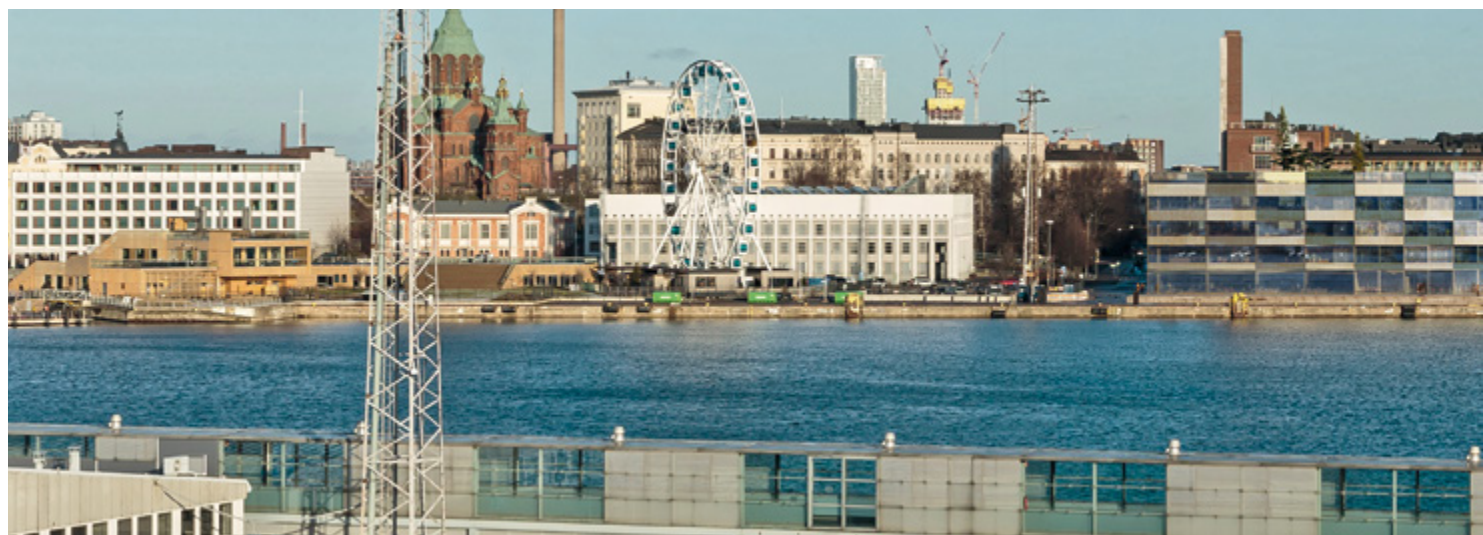
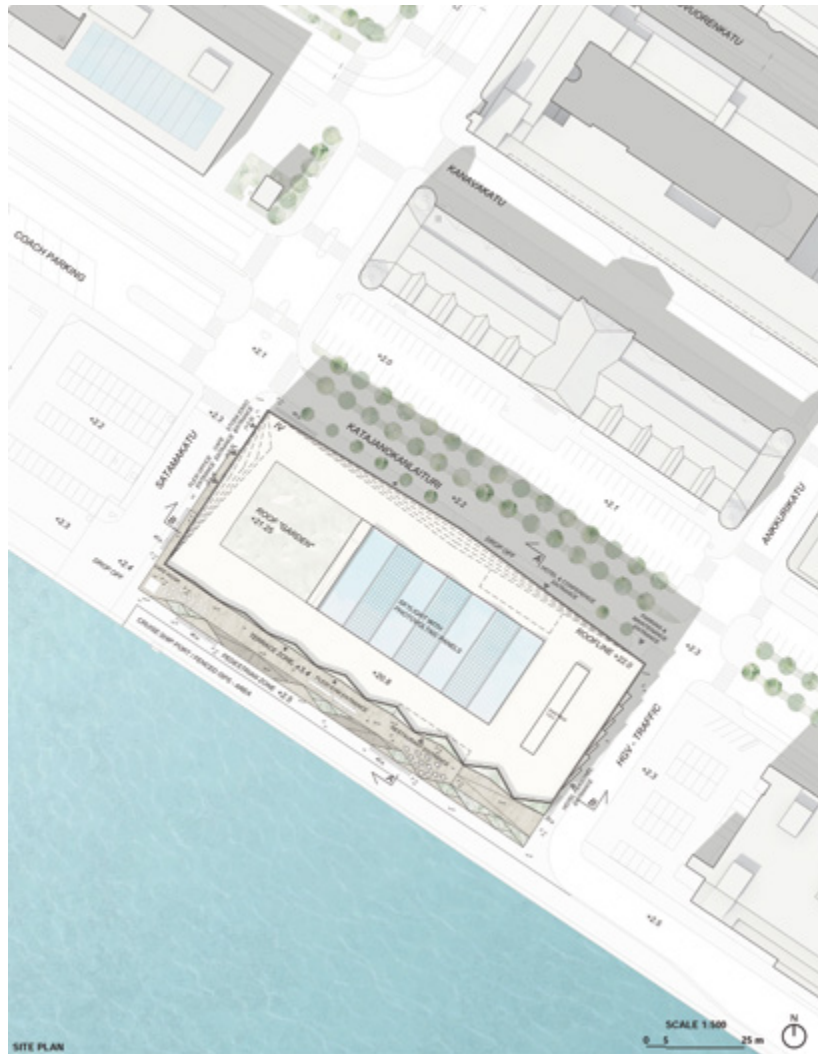
- Stéphane Privat

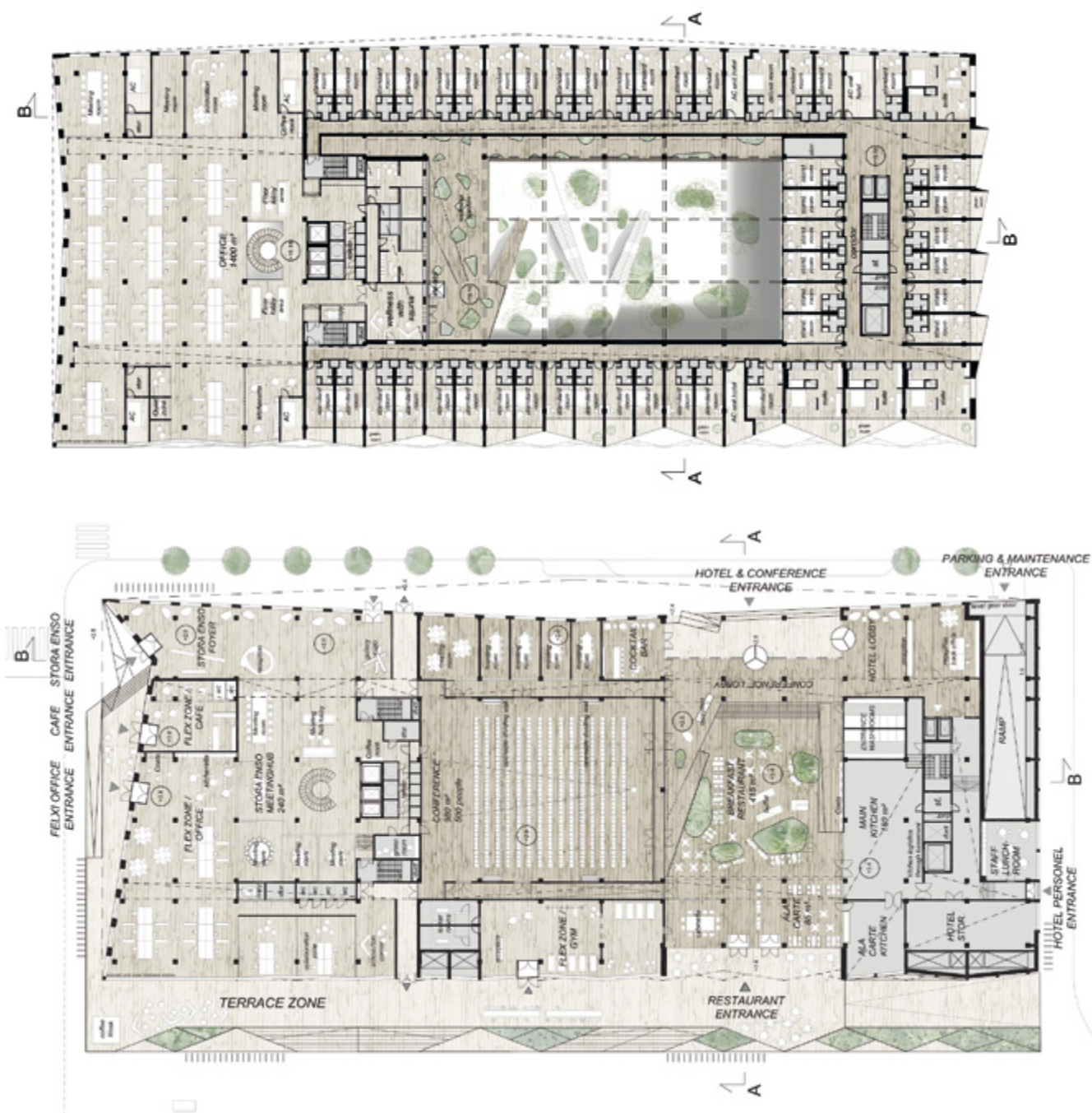
Copyright:

- ALA Architects







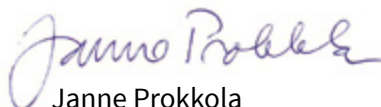


Signatories

Helsinki, June 17, 2020



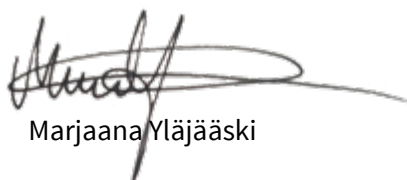
Ilkka Tomperi, puheenjohtaja



Janne Prokkola




Sari Raunio



Marjaana Yläjääski



Ville Hietalahti



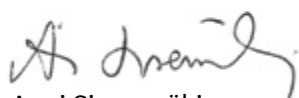
Samuli Miettinen



Antto Kauhanen



Ilkka Niukkanen, sihteeri



Anni Sinnemäki

