The Gothenburg Cable Car must be much more than just a means of transportation – it will communicate and connect people across the water, transform the cityscape, enable new opportunities for living and work, and define the culture of the city, day and night. A monumental infrastructure for mobility in Gothenburg, it must both connect to the character of the city and create a new urban space where it meets the street and the waterfront—a place for dark movement, experience, identity, and encounter, shaping Gothenburg’s future.

The cable car is for everyone—a positive addition for all—on the daily commute, the tourist, or the person on the street. In dynamic stations and soaring towers, mass movements will be orchestrated into a seamless fluid movement within the urban system. Stations will be designed as urban ambience, where green public space, amenities, and social spaces converge. Station design will be conceived as a continuation of the context, an urban landscape, and provide connections at different levels with existing and future programs—urban squares, parks, restaurants, and cafes, hotels, offices, and residential developments. They are embedded in each neighborhood where they land and provide future places of gathering within the city.

The towers and towers emerge from the same DNA as the stations, act in dialogue with each other and their surroundings. They interlace at the middle with lightweight steel tower above, creating a delicate branching expression against the sky and their solid three-point base supports produce a covered public gathering place. The hollow shaft within each tower creates an unusual oculus to the sky above. The towers will be icons grounded in a sense of place, forming new places where Gothenburg will meet and interact, whether within a bustling square, a relaxing green park, or an island in the city center.

The Gothenburg Cable Car must be much more than just a means of transportation—it will embed itself into the cultural fabric of Gothenburg, finding their place within the urban landscape. It will be a vital part of Gothenburg’s cultural identity. The Gothenburg Cable Car will continue the reimagining of the city as a vibrant place where all will converge with pixels and bits and, even as the city expands, local feeling and identity remain.

Infrastructure of place:
The design offers an adaptable system, an architectural strategy for embedding the proprietary infrastructures of the Cable Car stations and towers seamlessly within dynamic urban neighborhoods. Unlike utilitarian infrastructures which often are indifferent to and disruptive of the historic fabric of places, the stations employ a language of resilience, enclosure, and connection—measuring barriers and forced direction, offering an inviting stream of access and movement, and enhancing the existing fabric around them. The towers will find their way naturally, and the non-users will find existing short-cuts and amenities to draw them in and through. Where the towers connect to the ground, they will find in ways that unsurprisingly produce charming places of gathering beneath them. Both will provide new public spaces for meeting and interaction, strengthening communities.

The infrastructure is connected as a fluid continuation of the context, an urban landscape, spatially extending what already exists into and around the platforms. Its structure is a folded urban canvas, wrapping the technical machinery of the cable car around and protecting the users from the elements. Uniquely, the station structure forms connections of different kinds—existing and future programs—urban squares, parks, restaurants and cafes, hotels, offices, and residential developments. They are embedded in each neighborhood where they land and provide future planned development. Architecturally, the station comprises a hybrid of the sculpted and solid concrete pier and a platform with engineered timber beams and ETFE pillow roof structures merging over the top.

The towers, emerging from the same DNA as the stations, act in dialogue with each other and their surroundings. Also a fusion of a modern base shaft interlacing at the middle with lightweight steel tower above, these structures create a delicate branching expression against the sky and their solid three-point base supports produce a covered public gathering place. The hollow shaft within each tower creates an unusual oculus to the sky above, the platforms within the towers provide access to a series of places, forming new places where Gothenburg will meet and interact, whether within a bustling square, a relaxing green park, or an island in the city.

Site planning at each tower and station envision quality place making from opening day through the transformation of surroundings as urban improvement advances over time. Always a connective, a gathering place and a destination, the cable car structures produce programmatic anchors for a defined, ecologically, secure, connected and compact future city.
The Cable Car will be the center point for a multitude of different means of transportation, a transport hub connecting the variety of transportation means that radiate from it. They will simplify incremental changes from existing networks of trains, buses, cycle routes, ferry, boat and lake traffic, making accessibility for people with disabilities not only to the cable car, but across the entire network. This should include Mobility As A Service (MAAS), a service creating and managing personized travel solutions.

**flows:**

The network light and travel priorities of the stations are informing: queuing is arranged in wide aisles for passing and multiplying the flow of passengers. The arrangement of the continuous benchmark path will be long enough to bring a bicycle. The design anticipates that a group may enter the cable car, including one with a bike or wheel chair, and queuing spaces allow such groups to remain together. The stations provide two parallel flows for queuing and exiting. During peak hours the design allows for separation of the two to ensure a rapid and natural flow of travelers.

**come on in?**

A seamless and associated queuing space is provided within the station. Day one, queuing will be fully integrated with the system of Västra. The design allows the flow of people passing the ticket control and communicates that all people are welcome and trusted.

**design for the cable car:**

The design for the cable car gives equal consideration—lie at the core of our design. The tempo of contemporary life leaves little time for scaling, so the routes to experience must be as fast and comfortable as possible, from the street to the station through the air and back to the street. The design shape space for intuitive navigating, with main and side ramps, escalators and elevators of making riders in short lines of contact from their approach to the station up onto the platform. The planning at stations and routes ensures connections that improve the urban fabric to enhance the flow of people and traffic. The design adopts a strategy of accessibility for everyone and deliberately makes no distinction between persons with disabilities and others.

**a seamless experience:**

The cable car can only be successful when providing for all user groups while facilitating fluidly and intuitively as means of transportation. Functionality and accessibility together will security and safety—"appled roaming or triggered"—lie at the core of our design. The space of contemporary life leaves little time for scaling, so the routes to experience must be as fast and comfortable as possible, from the street to the station through the air and back to the street. The design shape space for intuitive navigating, with main and side ramps, escalators and elevators of making riders in short lines of contact from their approach to the station up onto the platform. The planning at stations and routes ensures connections that improve the urban fabric to enhance the flow of people and traffic. The design adopts a strategy of accessibility for everyone and deliberately makes no distinction between persons with disabilities and others.

**for all:**

The design for the cable car takes into account the consideration to those who will not see it. A seamless, paradox, this is instead a paradigm shift which also places focus on the non-user and answers the essential question how the cable car can serve of benefit for all. The proposal identifies three different user groups and gives their specific needs equal importance:

- **The one-time user** may be the tourist, who rides the cable car as an amusement and a way to see the city. Their experience will consist of arriving in town, finding the station, purchasing tickets, and abandoning the view over Gothenburg.

- **The frequent user** may be a commuter, simply aiming to get from point A to point B as quickly, comfortably, and safely as possible. The cable car for the frequent user needs to operate and feel making it easier and more attractive to manage daily life on foot, by bike and by public transport in a seamless combination.

- **The non-user** may have little interest in the cable car system; it must still enhance the experience of their daily life. Because the stations and routes are associated with the paths of new public spaces and programs in the neighborhoods where they lie—supporting coexistence with people, city, food, music—they will foster new social and urban vitality.

**legend:**

- 1: public experience space at base tower
- 2: station development
- 3: integrated landscape and structure
- 4: generous passage over ground level
- 5: integrating experience into local
- 6: providing orientation from Järntorget
- 7: non-user experience in base and core sections
- 8: integrating other uses like main and core sections

Connect the future of Gothenburg

The station includes functional programming that supports the surrounding community, such as bicycle storage and maintenance and an information center. In addition, it connects to the Folkloren and future hotel development.

The surface first gives shape to the station and the context structured in a zoning expression to introduce the station at the base and main steps on Järntorget across Olof Palmes Plan to communicate clearly for intuitive way finding from and to the station and connecting seamlessly to existing public transportation networks. In addition, secondary access to the north shows riders arriving from future development toward the station.

This station’s narrow but existing strategy onto Järntorget will be further enhanced the zones of people arriving from the square. In addition, secondary routes with connections with that of the Folkloren when viewed from the square. Seen from the Järntorget street to the sea, the expression is more dynamic its mining steel roof structure and angle of inclined exposure of the trajectory of the cable cars taking flight. The sculptural columns base extending, tunnels and shaping pedestrian pathways into the landscape below.

Structurally, both stations are supported on tapered concrete piers which are connected with the superstructure elements for ensuring the weathered loads. The sculptural columns are connected with bored formed columns that can take the shape of the continuous surface which defines the roof, walk, and Rose. The laminated timber beams span across large, curved openings to create a rhythmic rhythm against the surrounding social pattern to the social decades. As a network, the stations will reinforce the place as a cultural destination in the city, linking to the future of work, education and living across the teams.
L-Station:
At Lindholmen, the Station lands in the historic center between highly diverse areas of housing, Chalmers Lindholmen, the Science Park and Göteborg Studios. This station has a unique opportunity to be the cornerstone of future development, connecting between these diverse functions, old and new. Our design proposal transforms the existing traffic circle and parking structure into a new urban transit node that can be developed with restaurants, cafes and other commuter and tourist amenities. As the pass-through station is quite large relative to its context, we propose a bermed landscape beneath it to connect the higher elevation of the adjacent residential area down to a pedestrian level across the site and to ease access to the platform level, thus reducing the perceived scale of the Station within the neighborhood. In addition, a double series of sculpted concrete piers supports the platforms above and carefully shapes the urban boundary and volumetric forms below. Interlaced with the concrete base, the pavilion level are engineered timber beam and ETFE enclosures, folding over the top, and expressing the trajectories of coming and going cable cars. Station platforms are sheltered from the weather and flooded with daylight. Glass lifts, escalators, and stairs convey riders easily up and down to each side of the platform. The mezzanine level provides areas for car storage and maintenance, as well as public amenity programs.

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Natural, renewable, and durable materials shape the architecture, the user experience with a humanist identity of the newly created urban nodes along the system. With public toilet facilities, bicycle parking, landscape and hardscape integration and storm water management, these structures will not stand alone but for sustainability. Secure, durable, low maintenance and elegant, these urban interventions will enrich the city while enhancing its ecology.

The Gothenburg Cable Car will connect the city where its built elements are also infrastructures for growth, supporting programmatic changes in the surrounding urban development over time. Integrated vegetation and permeable surfaces ensure regulated storm water mitigation improving the urban environment as it contributes to noise reduction and improved air quality, both outdoors and indoors. An architecture of natural lighting, active and passive solar heating, wind control and carbon neutral or low-carbon construction materials makes sustainability a corner piece of the identity of the newly created urban nodes along the system. With public toilet facilities, bicycle parking, landscape and hardscape integration and storm water management, these structures will not stand alone but for sustainability. Secure, durable, low maintenance and elegant, these urban interventions will enrich the city while enhancing its ecology.

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Material:
The folded surface of the stations is made of white concrete at the base, and interlaced steel beam structures over the top. The stations can be used as a shelter from the elements like a “shyed,” protecting from wind and rain close to the buildings. Natural light is brought into the center filtering light to generate a pleasant and calm atmosphere, an atmosphere of security and safety.

Sound:
Ropeway technology has innovated quickly, especially since it has been implemented in urban settings for public transportation. Sound and vibration mitigating strategies—such as dampening devices, low-noise lattice bridge design, and optimized cable grip alignments—have been developed by the ropeway manufacturers to increase passenger comfort and greatly reduce environmental disturbances due to noise. These silent systems may allow for semi-open structures integrated seamlessly in urban areas.

Cost:
In order that the system’s structure and the sophisticated design of the stations avoid the potential for prorating revenue costs, the team advises that budget analysis for construction costs are undertaken based on the concept at the earliest stage for value management. Costs of the system as a whole should be combined in coordination with a ridership and revenue analyses to assess how the capital cost for construction can be offset during operations, and how the features of an urban reactivity offer unique revenue-generating public benefits that other public transportation systems lack. The future economic development potential associated with the improved urban form and transportation integration at the stations should also be considered.

Legend:
1) tram station2) main entrance with escalators and stairs3) a café on ground level below departure level4) bicycle parking rental5) possible future development6) entrance to elevators on ground level7) view connecting ground level to departure level8) station surface extends into direct surroundings

Additional information:
- Natural, renewable, and durable materials shape the architecture, the user experience with a humanist identity of the newly created urban nodes along the system.
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- An architecture of natural lighting, active and passive solar heating, wind control and carbon neutral or low-carbon construction materials makes sustainability a corner piece of the identity of the newly created urban nodes along the system.
Inspired by both the masonry solidity of the city’s medieval past on the south, and the dramatic steel harbor cranes of Gothenburg’s collective shipbuilding history on the north, the Cable Car towers are a hybrid of concrete below and steel above. Structurally, each ropeway tower springs from grade on an efficient tripod base that narrows to a slender shaft with a dynamic trefoil cross-section. This portion of the tower is made of high performance concrete, and gives way to the branching upper structure which supports the saddle, and is envisioned to be made of darkened stainless steel. Both the high performance concrete and stainless steel are appropriate materials for a robust infrastructure.

Along Emigrantvägen the tower creates a new urban event in between Järntorget and Göta Älv. Situated in a new parkland within the future development of the waterfront, the base of the tower forms a shaded amphitheater. On a sunny day in spring people gather underneath the tower to relax and meet, with light offerings of food, coffee or beer, and present music, art or performance.

Located in the water in front of Lindholmspiren and extending the square at Diagonalen the tower provides for a unique place on the water. A wooden pier beneath the tower tripod provides an urban beach, a place to watch the city in the evening, a dock for arrival by boat.

Järntorget Tower:
View from Diagonalen

Lindholmen Tower:

On a rainy autumn day young children play in the water collected in the shaped landscape creating controlled storm water runoff for the larger context.

Lighting design:
In the evening, the Cable Car system will awaken, the towers becoming integrated beacons and points of orientation within the Gothenburg skyline, and the stations creating hubs for the city’s nighttime pulse. The lighting design will be carefully orchestrated to create an atmosphere of comfort and safety throughout the system. Long-life LED fixtures will be employed throughout the system for high-quality illumination and low operation and maintenance costs. Lighting controls will be on a GPS based time server, synchronized across the system and pre-programmed to adjust for the seasonal variation in daylighting.

The towers, 3 high output LED flood lamps mounted in protective housings at grade will bathe the lower shaft and crown in soft white light, rendering the sculptural form and giving a lifetime presence without over-lighting. Additional LED flood lights mounted within the hollow center of the tower shaft, fitted up and down, will create a bloom of light from within at the branching crown of the structure and at the public areas sheltered at the base.

At stations, the timber and ETFE roof structure is up-lighted from below to create a diaphanous glowing expression to orient and to be seen in the public. LED up lights give the concrete based structure a subtle visibility, while low light in the surrounding landscape, mat and pedestrian lateralades and on the platform clearly illuminate pathways while constraining the lighting sources from view.

Cars are externally illuminated with integrated continuous linear LED fixture to appear at a distance as ‘bubbles’ floating back and forth across the water. Low lighting at the interior below the seating level minimizes glare within, making the views of the city or night as dramatic as possible.

tower design:
Located in the water in front of Lindholmspiren and extending the square at Diagonalen the tower provides for a unique place on the water. A wooden pier beneath the tower tripod provides an urban beach, a place to watch the city in the evening, a dock for arrival by boat.

The tower consists of a concrete tripod base, the central shaft, and the steel crown. The base is adaptable for different contexts. The central shaft - reminiscent of the trunk of a tree - can be adjusted to the required tower height while the crown and the base remain the same.