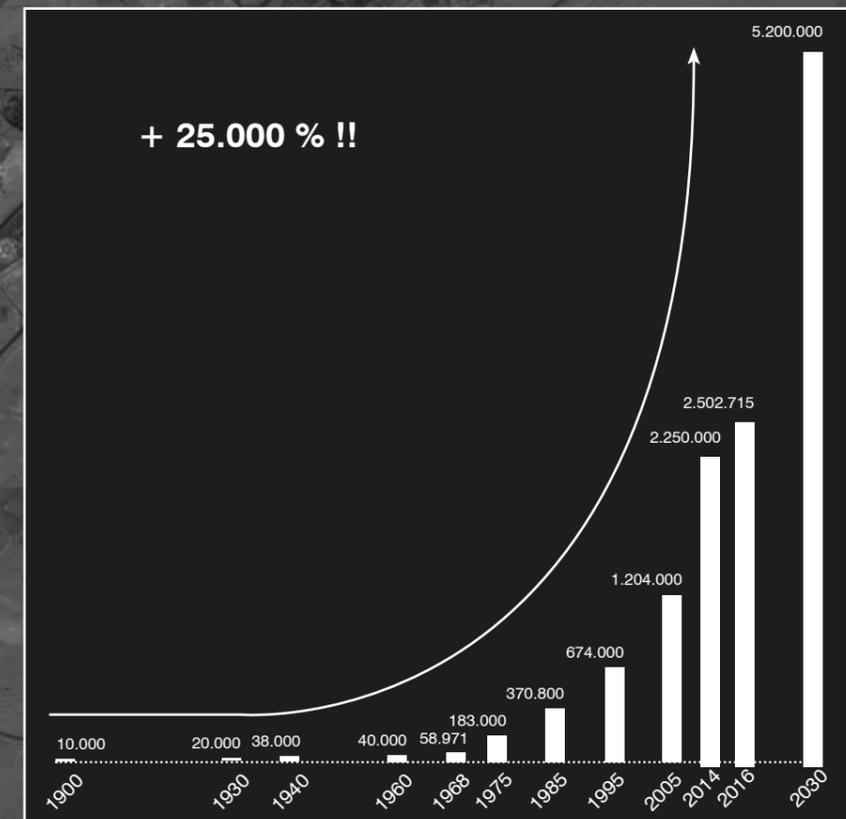
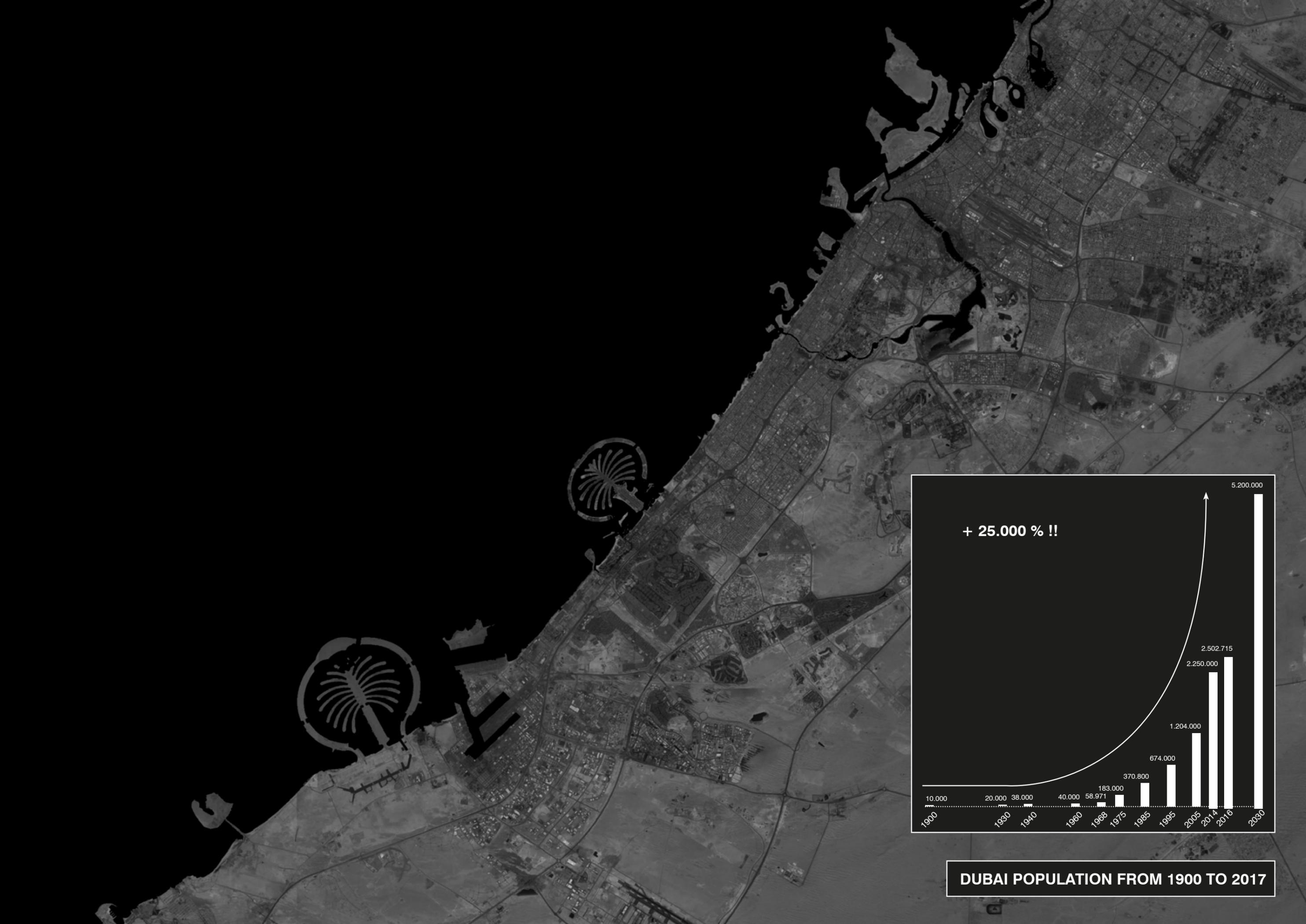


An **RTA**
Connectivity
Hub
UNION OASIS PARK

Urban Mesh as Architecture: A Tim Culbert Design Proposal



DUBAI POPULATION FROM 1900 TO 2017

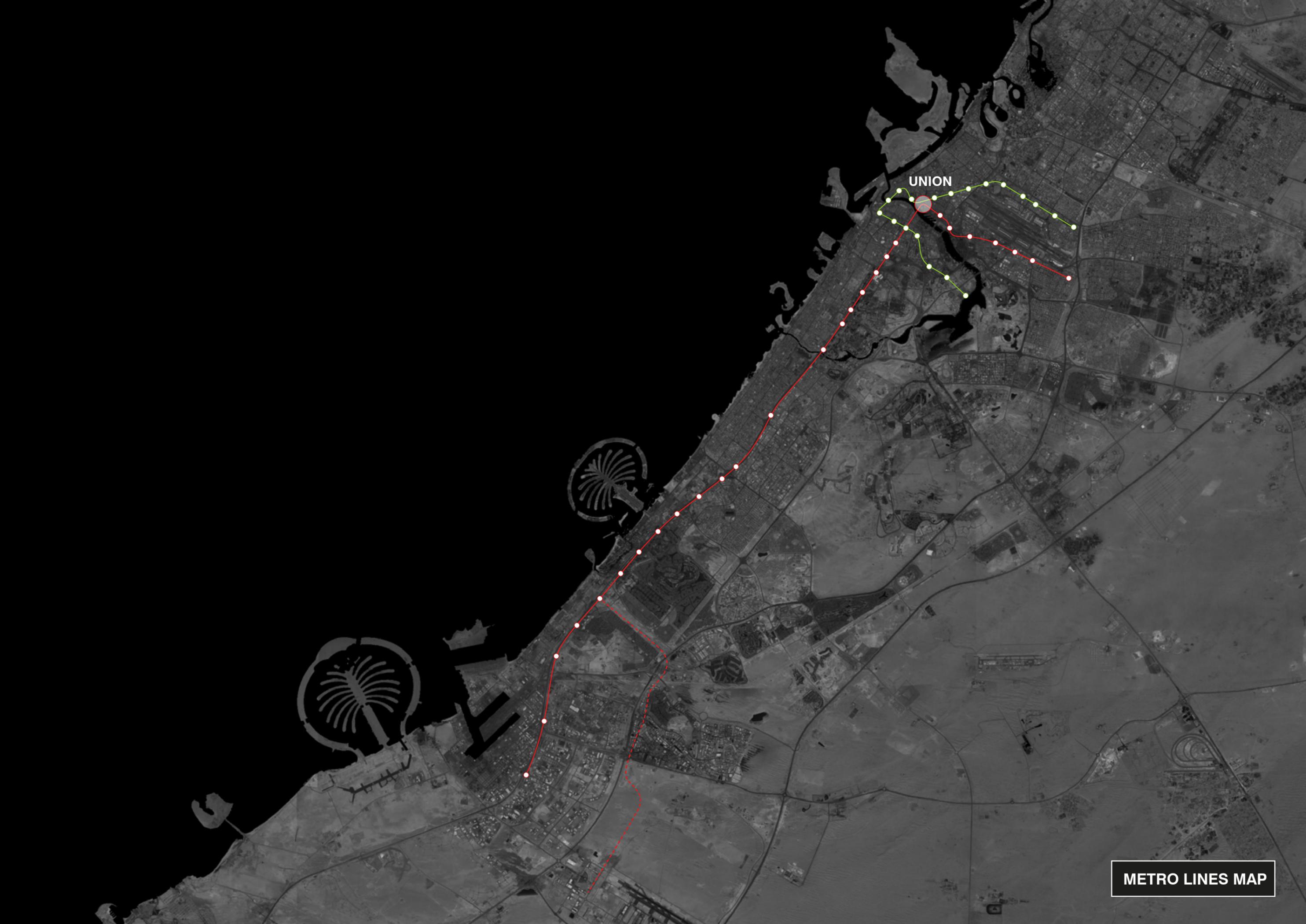


UNION

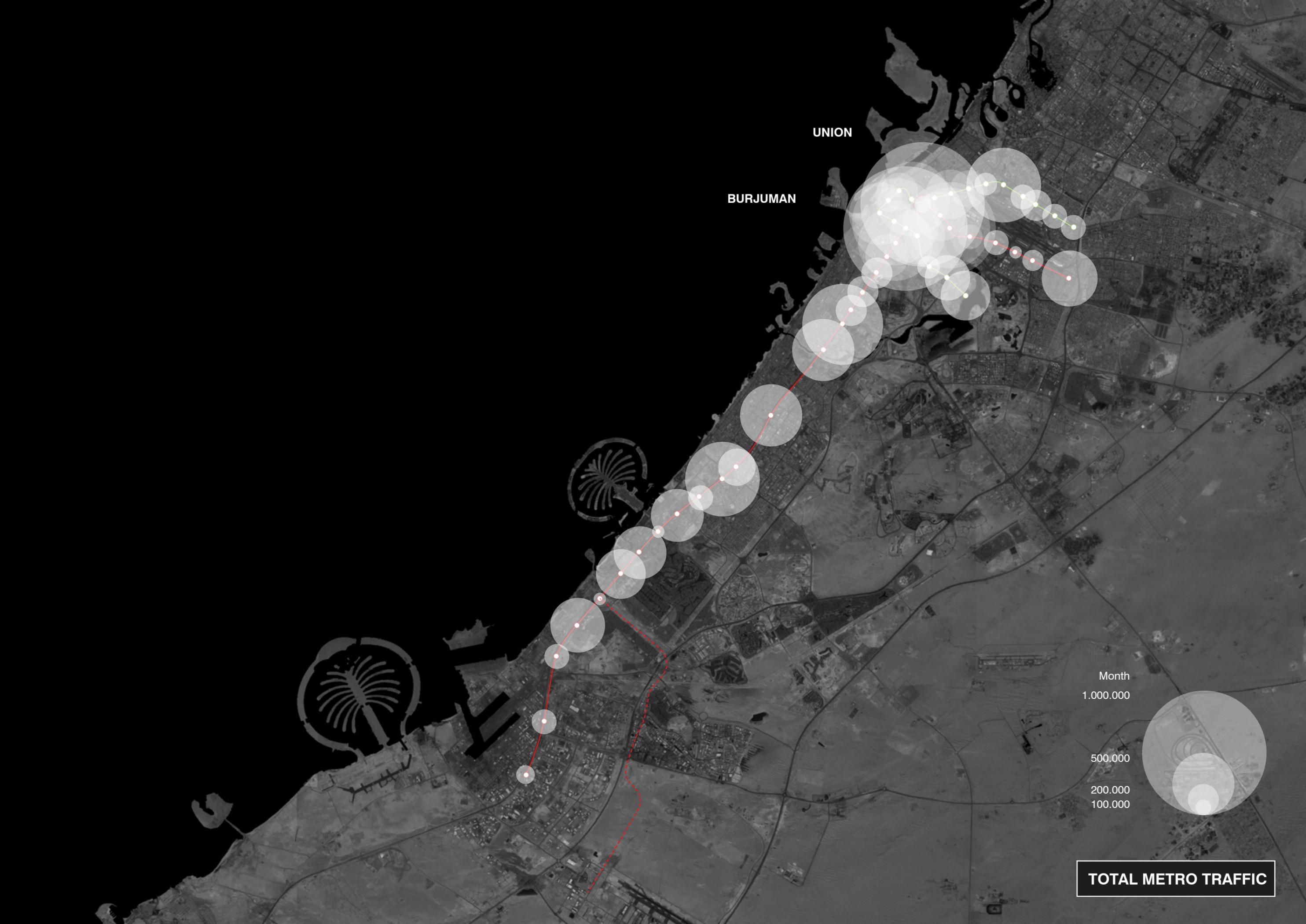
UNION PROJECT SITE



UNION



UNION

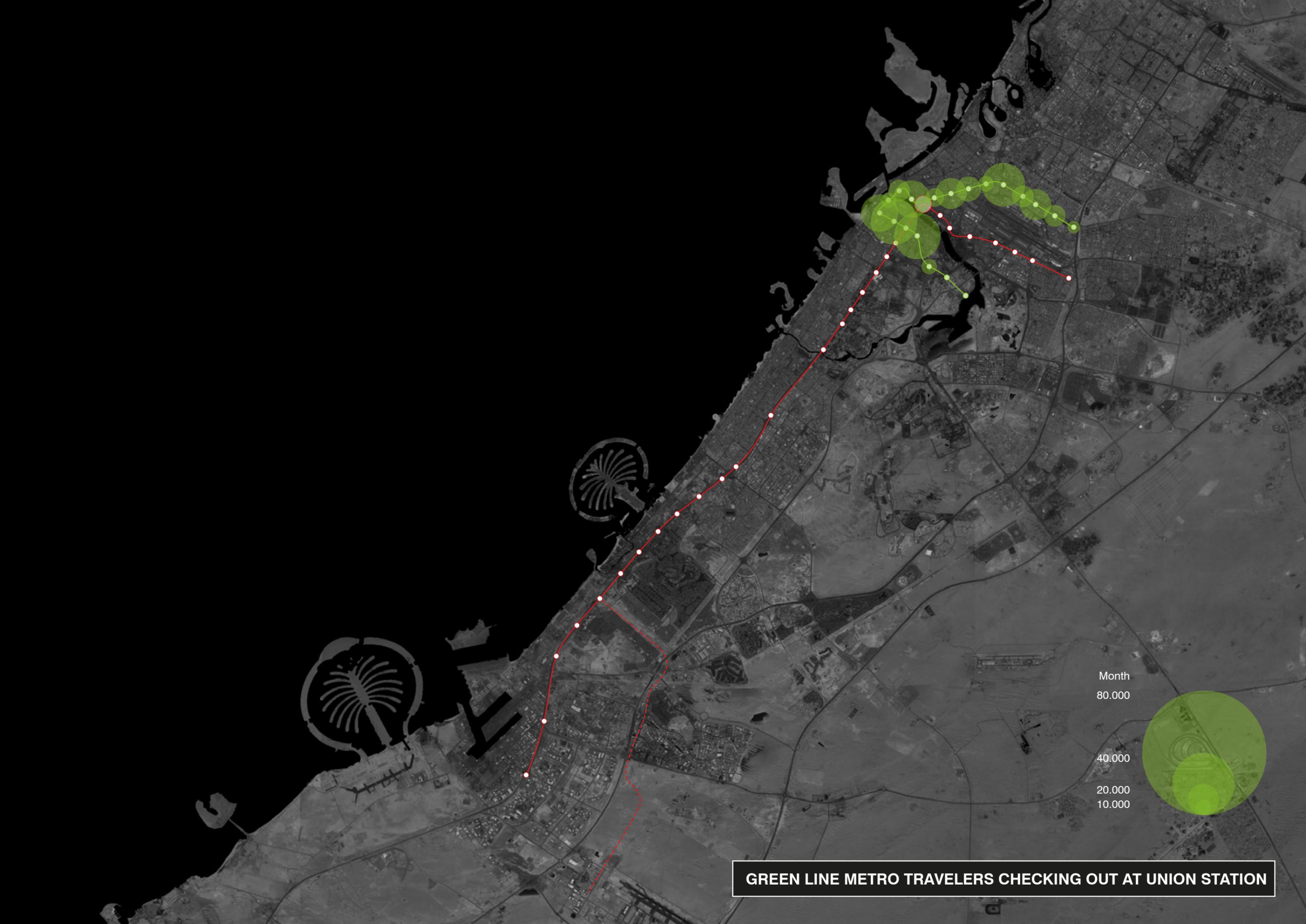


UNION

BURJUMAN

Month
1,000,000
500,000
200,000
100,000

TOTAL METRO TRAFFIC



GREEN LINE METRO TRAVELERS CHECKING OUT AT UNION STATION



Month
80.000
40.000
20.000
10.000

RED LINE METRO TRAVELERS CHECKING OUT AT UNION STATION



BURJUMAN

BURJ KHALIFA / DUBAI MALL

BUSINESS BAY

DEIRA CITY CENTER

RASHIDIYA

Month
80.000
40.000
20.000
10.000

TOP 5 METRO STATIONS CHECKING OUT AT UNION STATION



AN EVOLVING SITE...



DUBAI CLOCK TOWER 1985



DUBAI CLOCK TOWER 2015



AN OASIS IN THE MIDDLE OF DUBAI...



Bus station #1

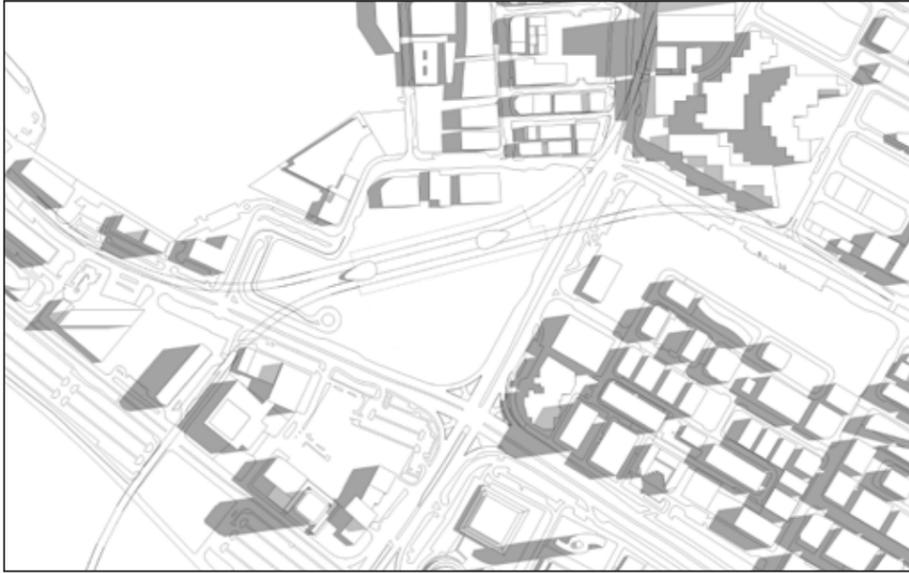
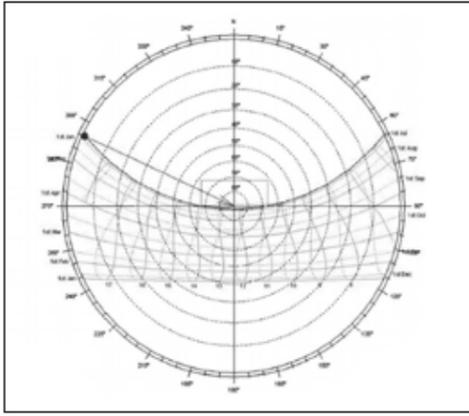
Metro entrance #1

Bus station #2

Metro entrance #2

Water transportation terminal

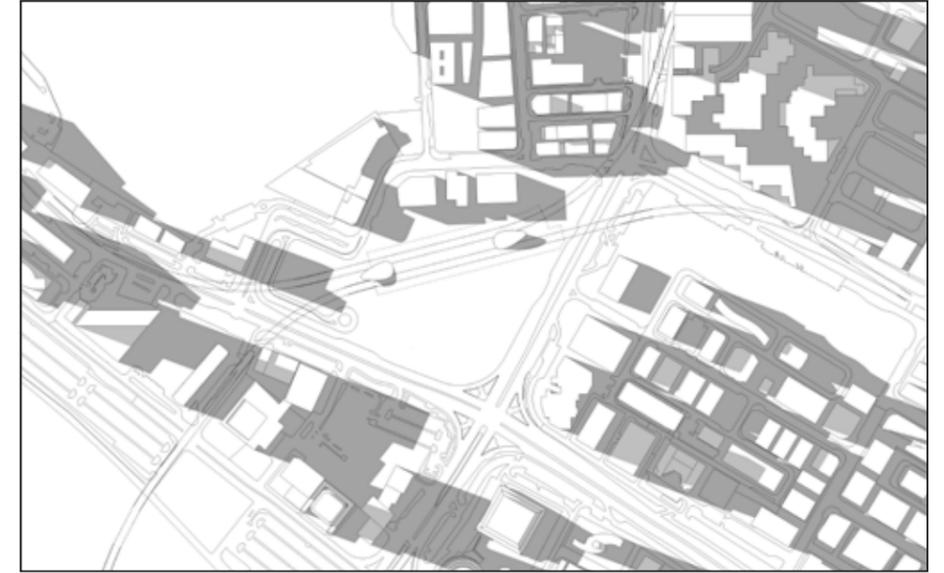
...YET WITH A FRAGMENTED INTERMODALITY !



Summer solstice 21/06/2017
9AM



Summer solstice 21/06/2017
1PM



Summer solstice 21/06/2017
6PM



Winter solstice 21/12/2017
9AM



Winter solstice 21/12/2017
1PM



Winter solstice 21/12/2017
4PM

AND A SUN OVERDOSE !!



SO WHAT ARE THE POSSIBILITIES

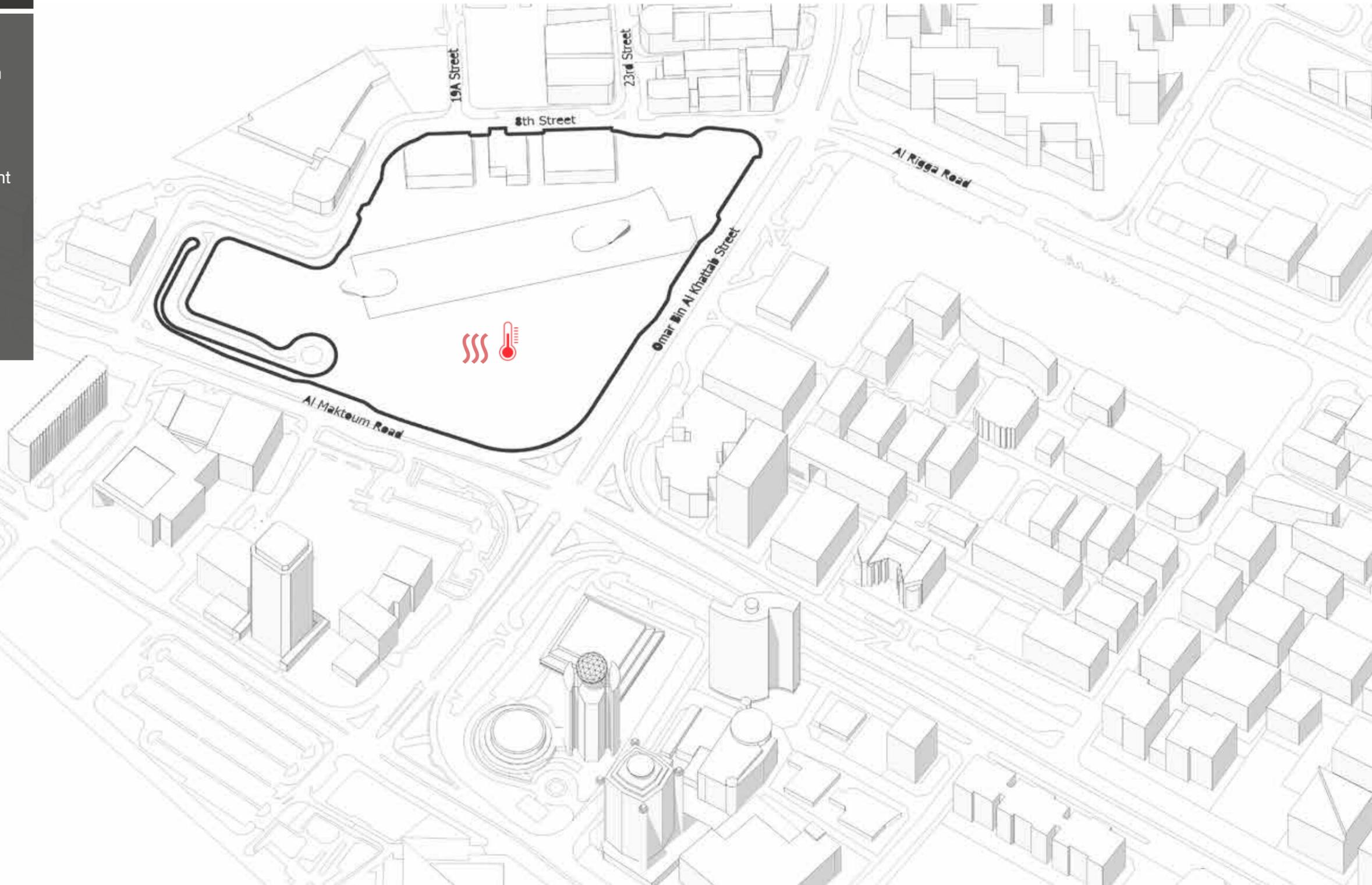
COMPARING TYPOLOGIES

UNION METRO STATION

Plot area: 37,854 m²

Passenger figures: 1M/month

Dubai Union Oasis Metro is an exceptional urban plot, situated in Deira, downtown Dubai, receiving over 1 million passengers a month, it offers an exceptional setting for an urban transport hub development. Such a development could set the standards for the hubs of tomorrow in the UAE and in the world. However, it is highly exposed to solar radiation and is not an inviting environment for pedestrians or open air activities.



COMPARING TYPOLOGIES

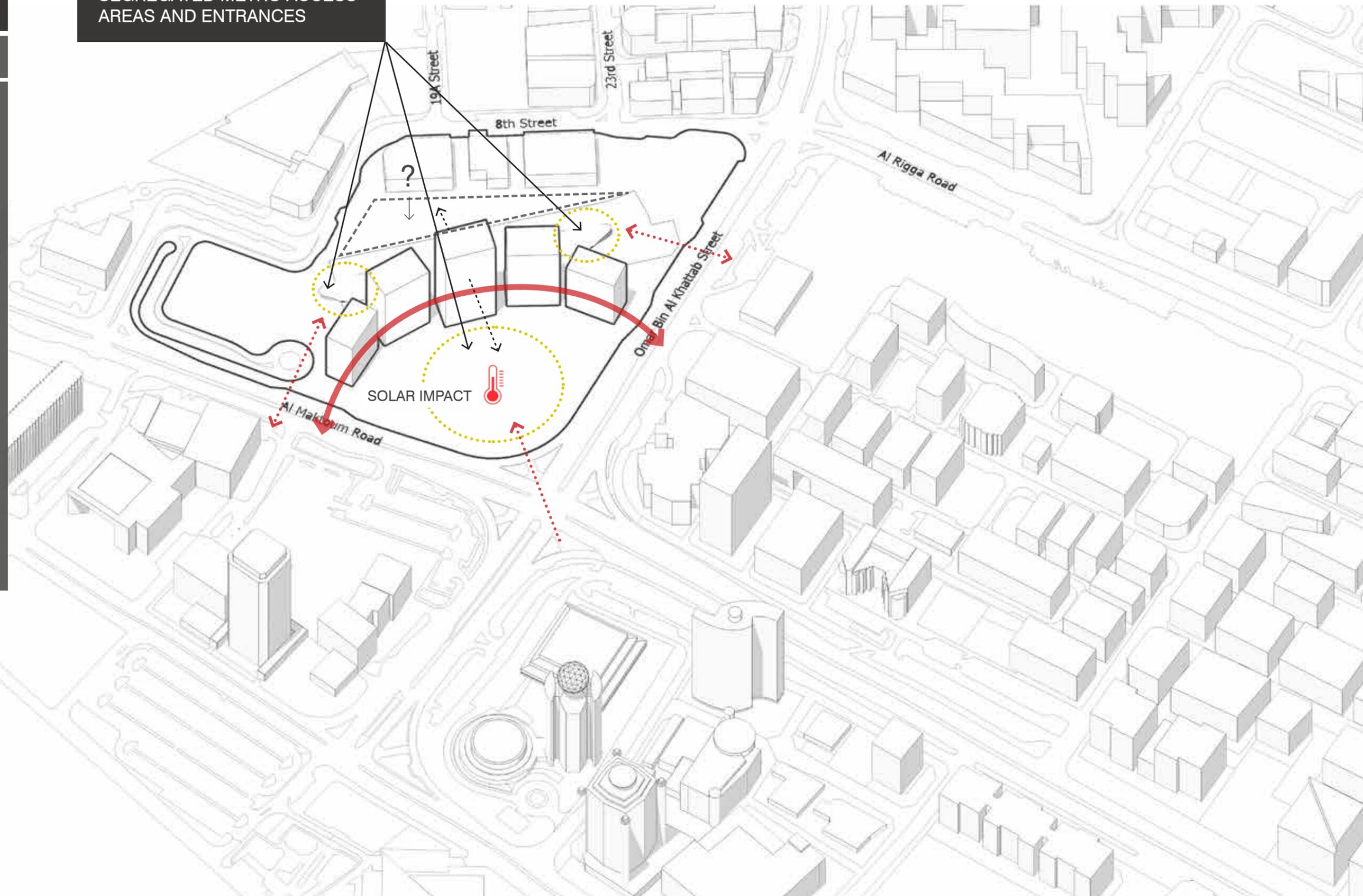
ADVANTAGES

- Creates real estate value.
Built-up area = 110,000 m²

DISADVANTAGES

- High cost.
- Dose not create urban continuity.
- Totally exposed to solar radiation.
- Offers limited public park or oasis area.
- Facing wrong direction - street crossing.
- Cuts the plot in the middle creating physical and visual barrier segregating Southeastern and Northwestern areas of site.
- Dose not offer transition spaces for transportation mode switching.
- Dose not play the role of a HUB.
- Dose not play the role of a TOD.
- Offers poor connectivity.

SEGREGATED METRO ACCESS AREAS AND ENTRANCES



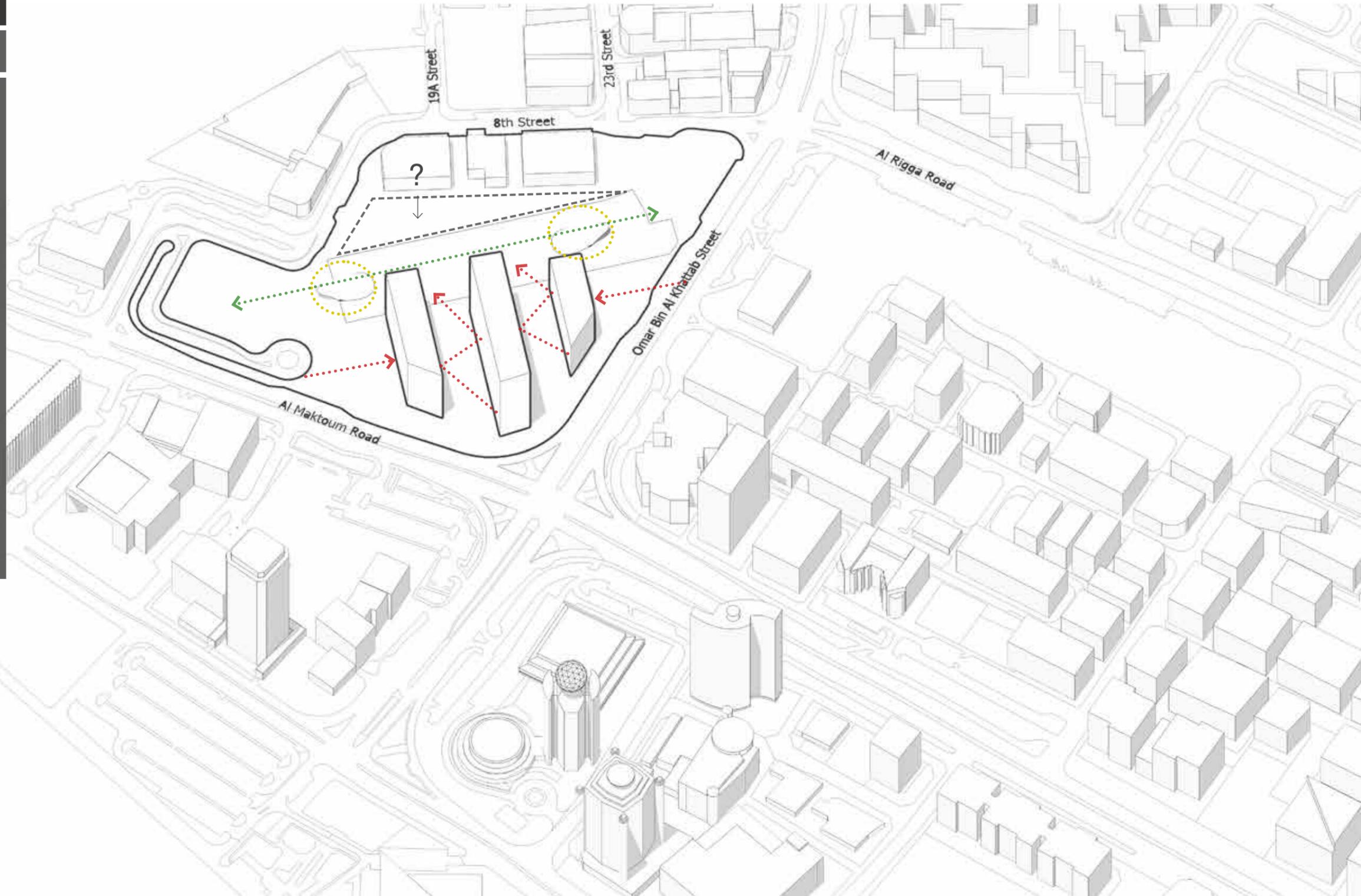
COMPARING TYPOLOGIES

ADVANTAGES

- Creates real estate value.
Built-up area = 55,000 m²

DISADVANTAGES

- Dose not create urban continuity.
- Exposed to solar radiation, Northeast and Southwest.
- Offers limited public park or oasis area.
- Faces wrong direction - street crossing.
- Creates physical and visual barrier segregating Southeastern and Northwestern areas of site.
- Dose not offer transition spaces for transportation mode switching.
- Dose not offer connectivity to harbor.
- Dose not play the role of a HUB.
- Dose not play the role of a TOD.
- Offers poor connectivity.



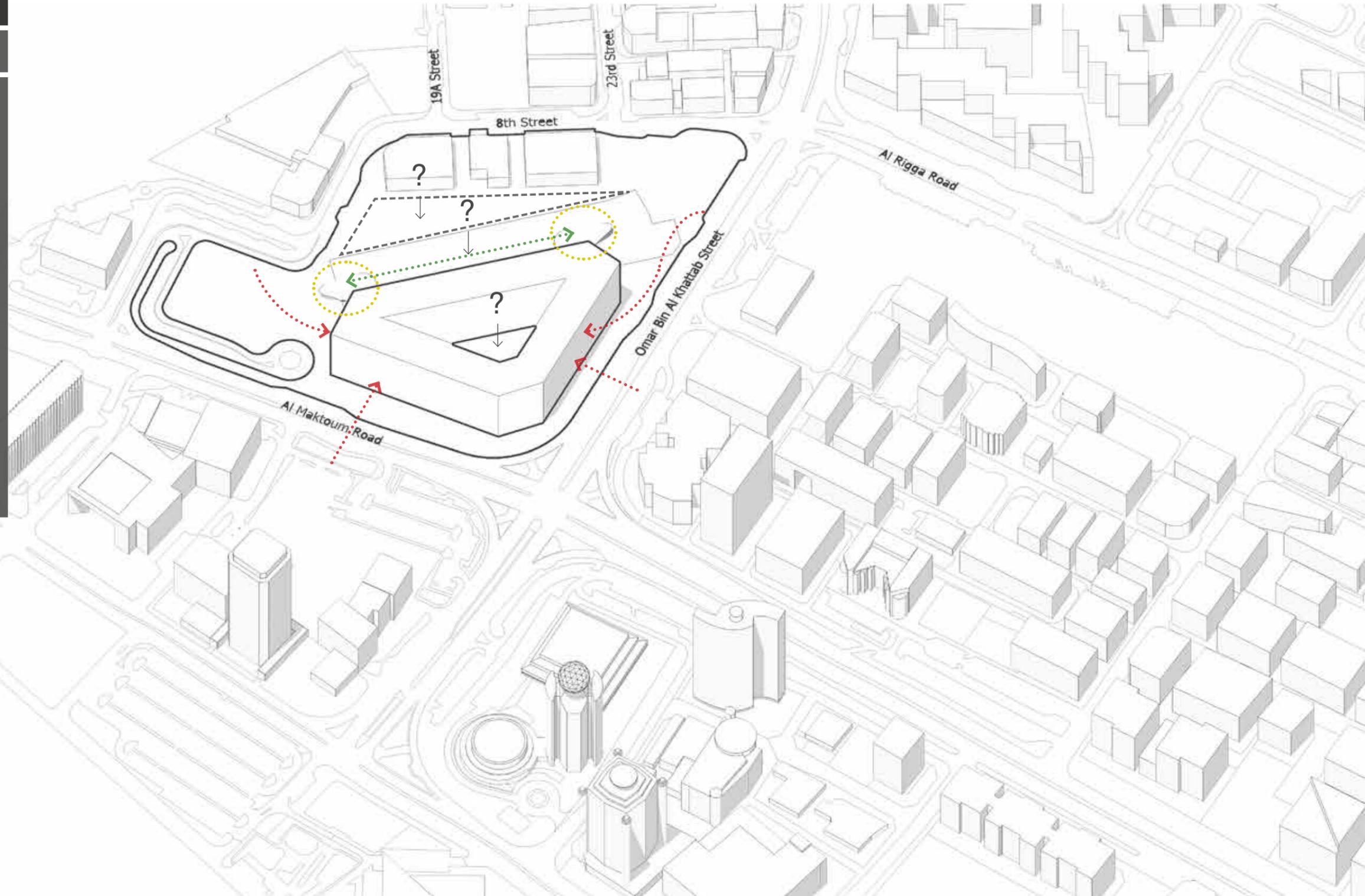
COMPARING TYPOLOGIES

ADVANTAGES

- Creates real estate value.
Built-up area = 57,600 m²

DISADVANTAGES

- Exposed to solar radiation, East to West.
- Offers no public park or oasis area.
- Dose not benefit from total site potential, neglecting north area of site.
- Creates physical and visual barrier.
- Dose not offer transition spaces for transportation mode switching.
- Offers poor connectivity.
- Dose not offer connectivity to harbor.
- Dose not play the role of a HUB.
- Dose not play the role of a TOD.



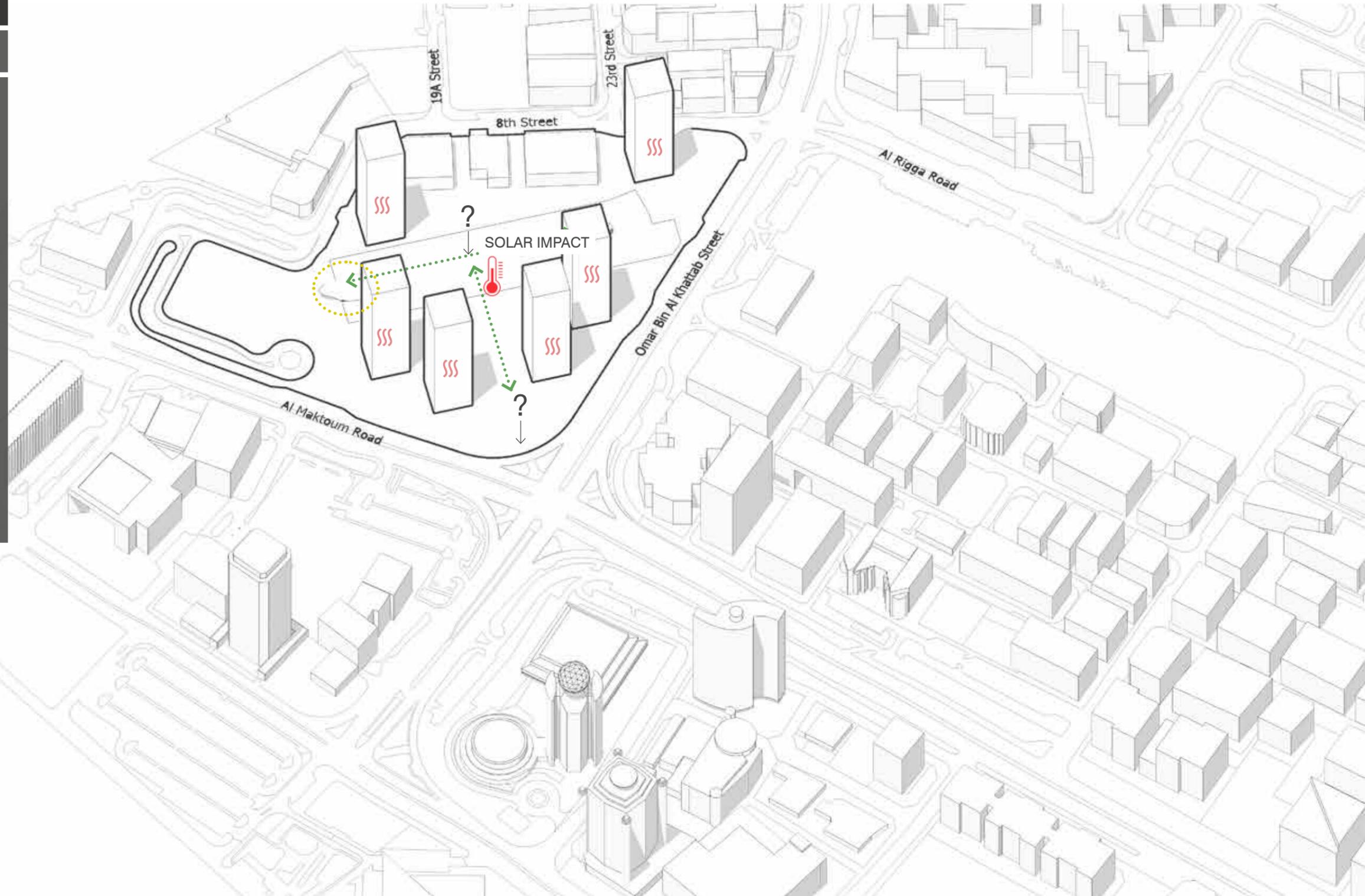
COMPARING TYPOLOGIES

ADVANTAGES

- Creates real estate value.
Built-up area = 56,000 m²

DISADVANTAGES

- Exposed to solar radiation, East to West.
- Occupies plot in an inconsistent manner.
- Offers no or little public park or oasis area.
- Scheme layout facing street crossing.
- Absence of intelligent solar protection.
- Dose not offer transition spaces for transportation mode switching.
- Offers poor connectivity.
- Dose not offer connectivity to harbor.
- Dose not play the role of a HUB.
- Dose not play the role of a TOD.



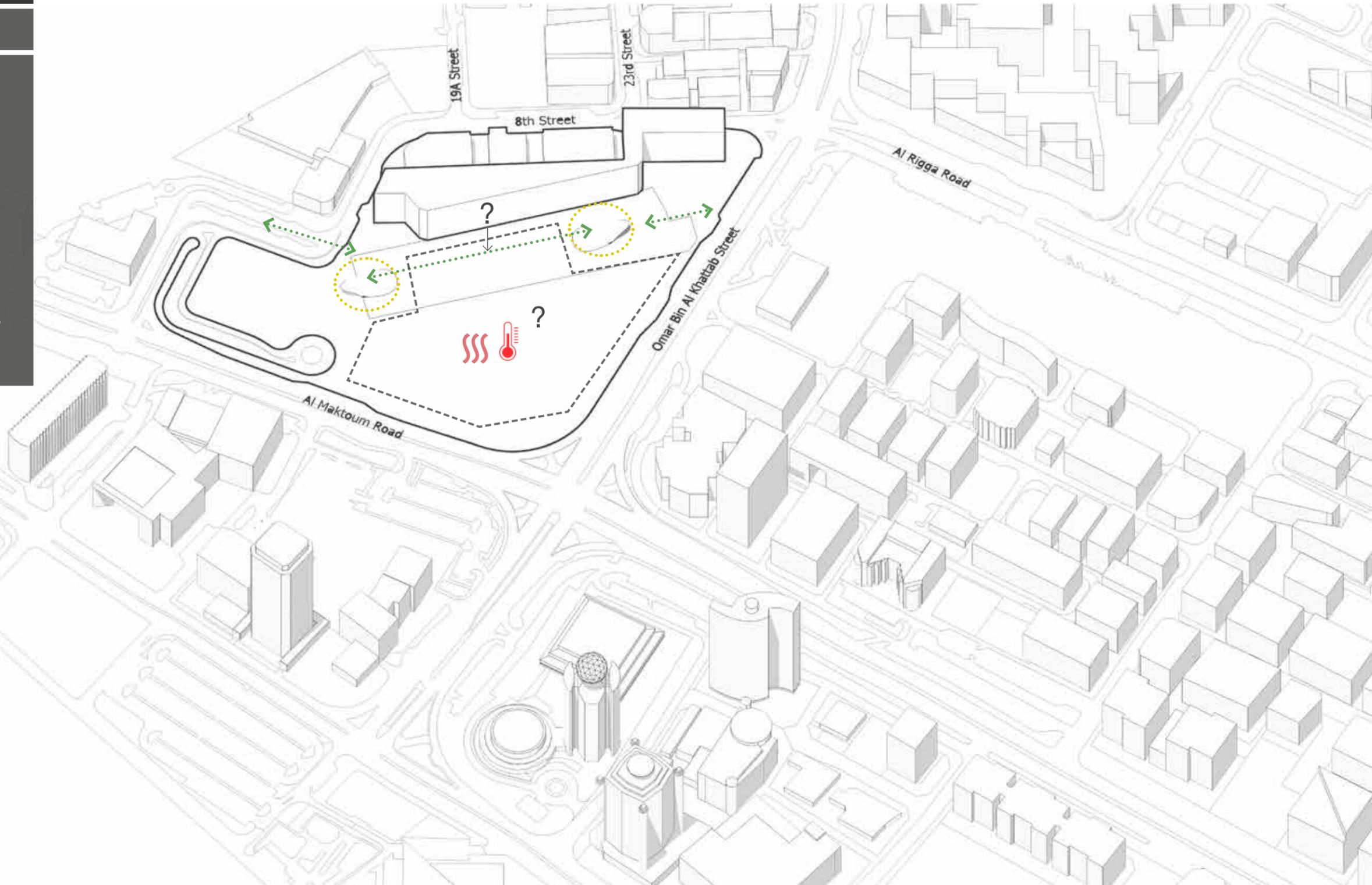
COMPARING TYPOLOGIES

ADVANTAGES

- Creates real estate value.

DISADVANTAGES

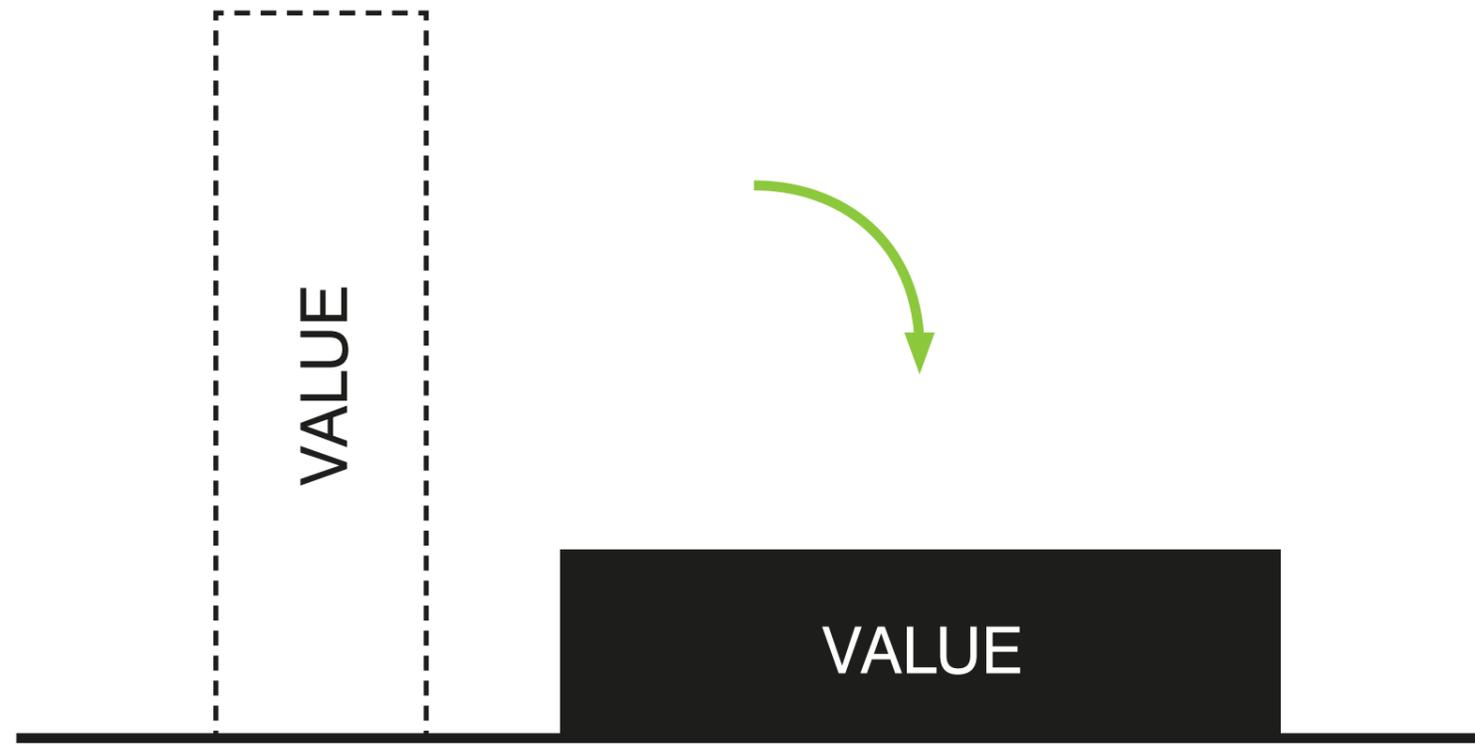
- Exposed to solar radiation, East to West.
- Occupies plot in a limited way.
- Dose not offer transition spaces for transportation mode switching.
- Dose not propose any solution for connecting transport modes.
- Dose not offer connectivity to harbor.
- Dose not play the role of a HUB.
- Dose not play the role of a TOD.





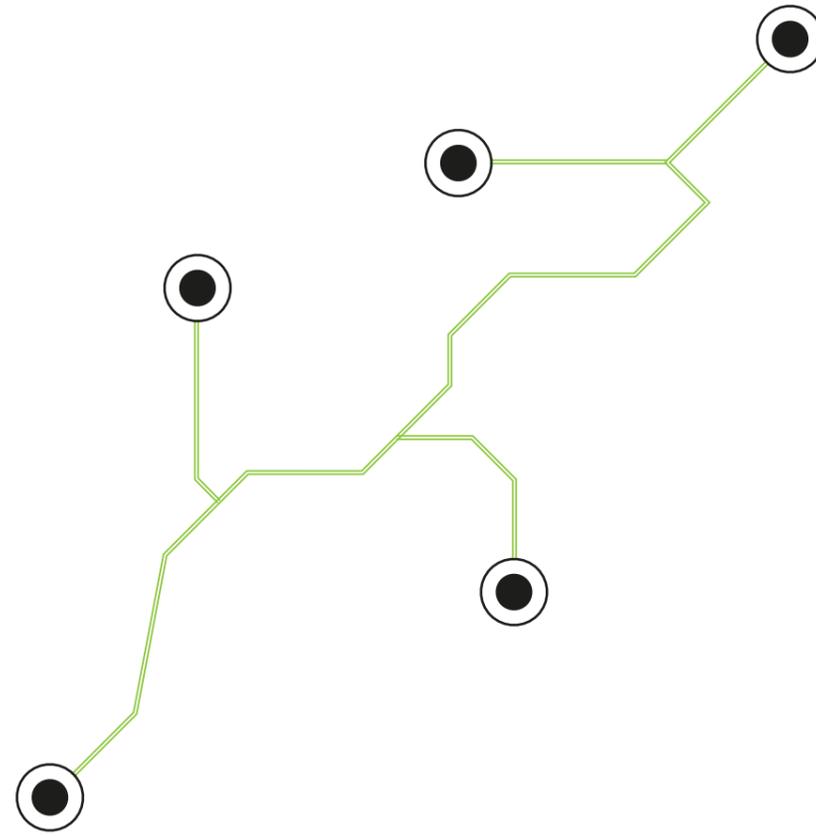
LET'S SHAKE THINGS !





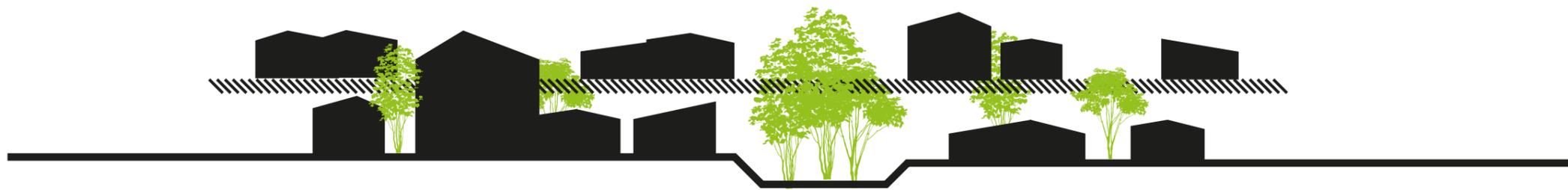
CAN A SKYSCRAPER BE HORIZONTAL ?





CAN A PUBLIC THROUGHWAY (RE)LINK THE CITY ?





CAN AN OASIS BE URBAN ?

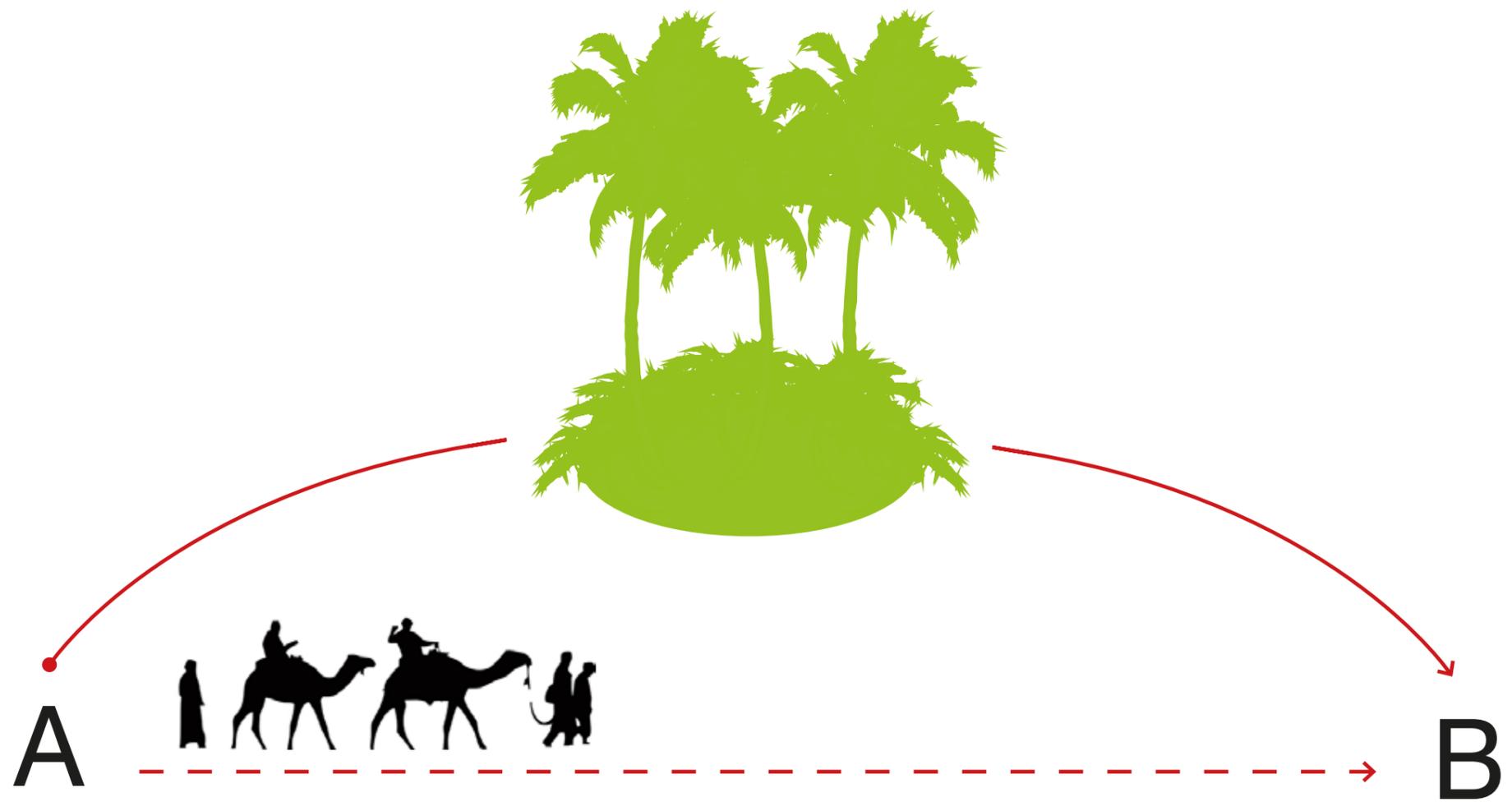
VALUE



RECREATION

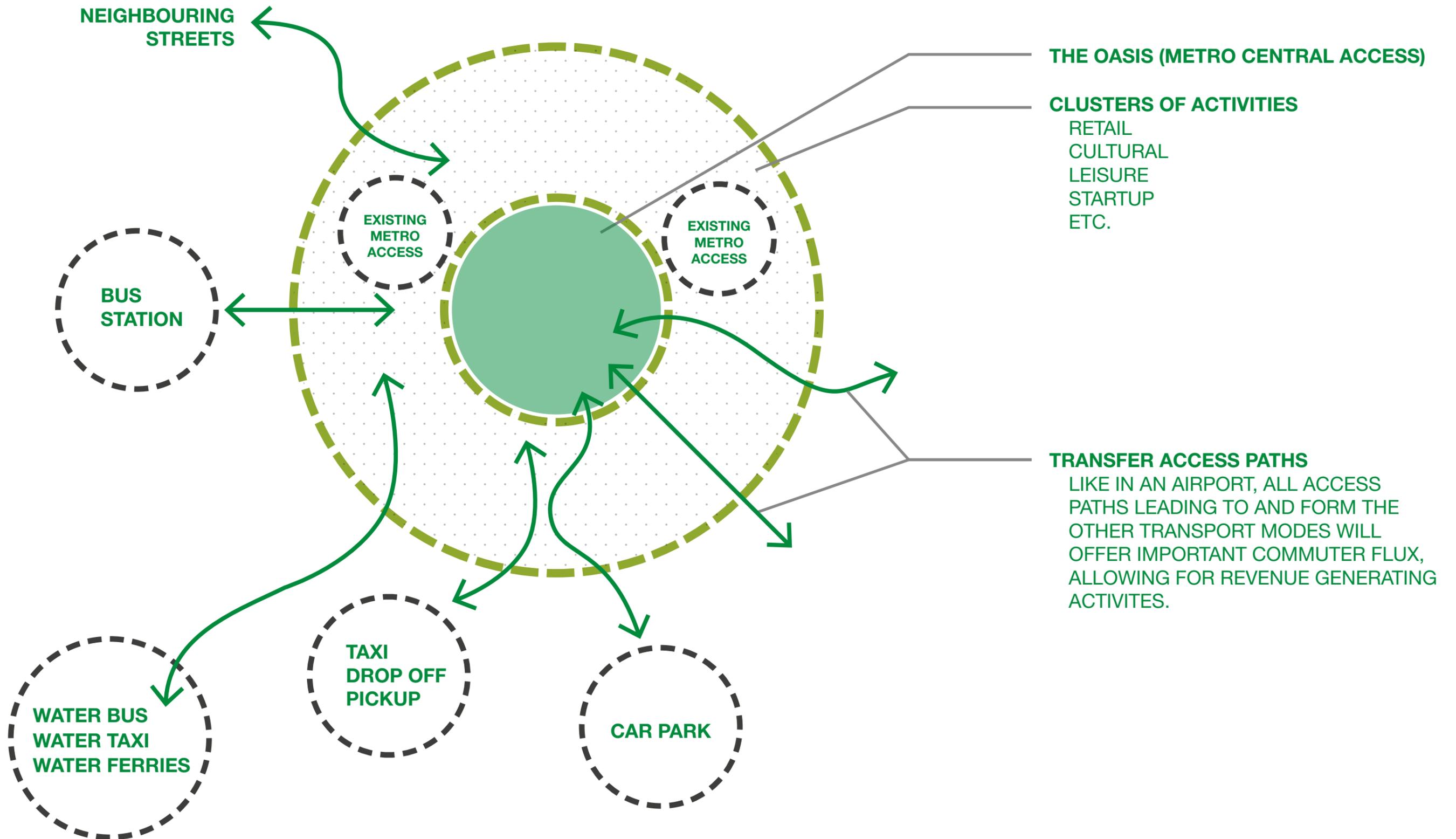


MOBILITY

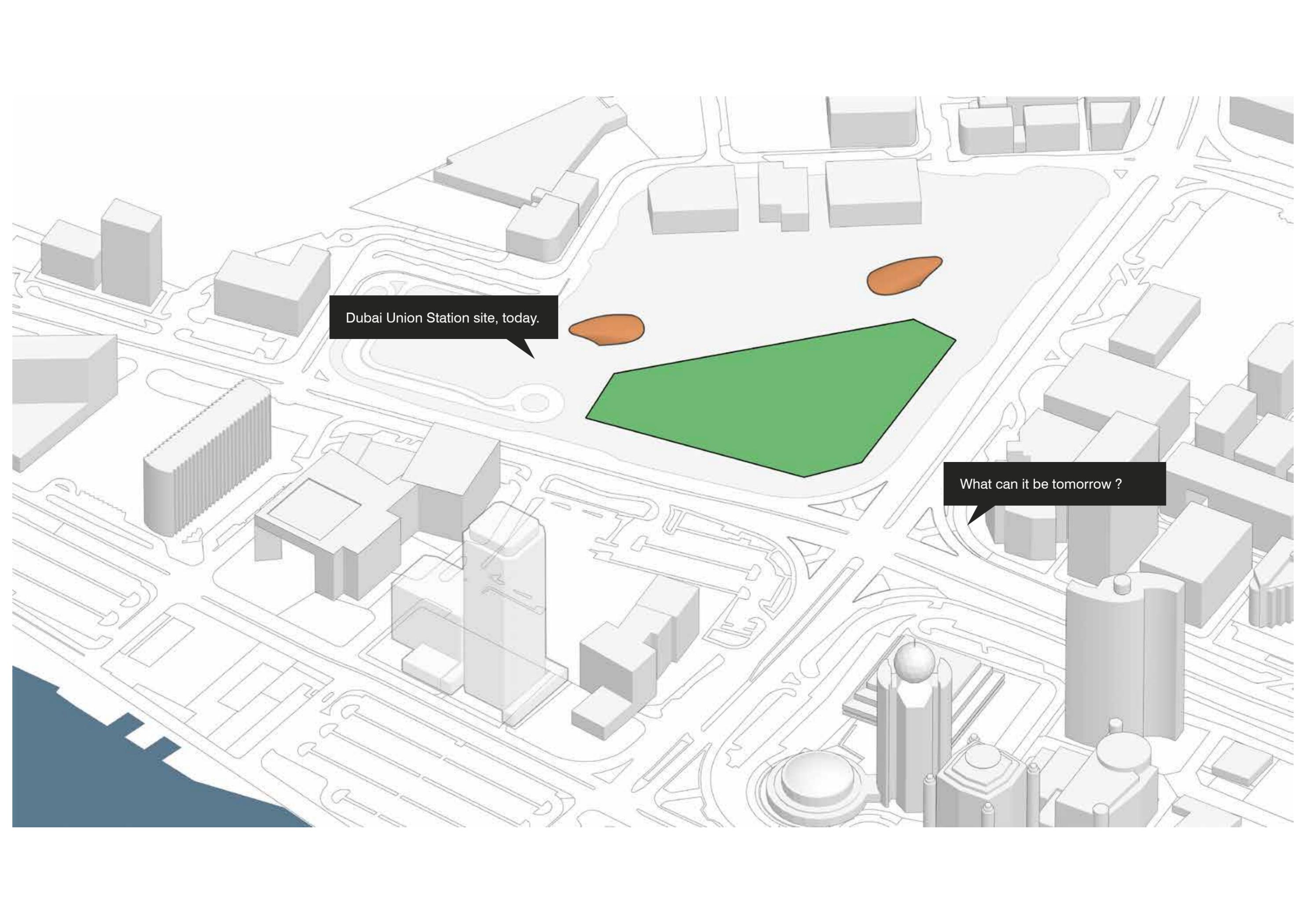


DUBAI UNION METRO STATION AS AN OASIS...

RETHINKING THE SITE AS A HUB



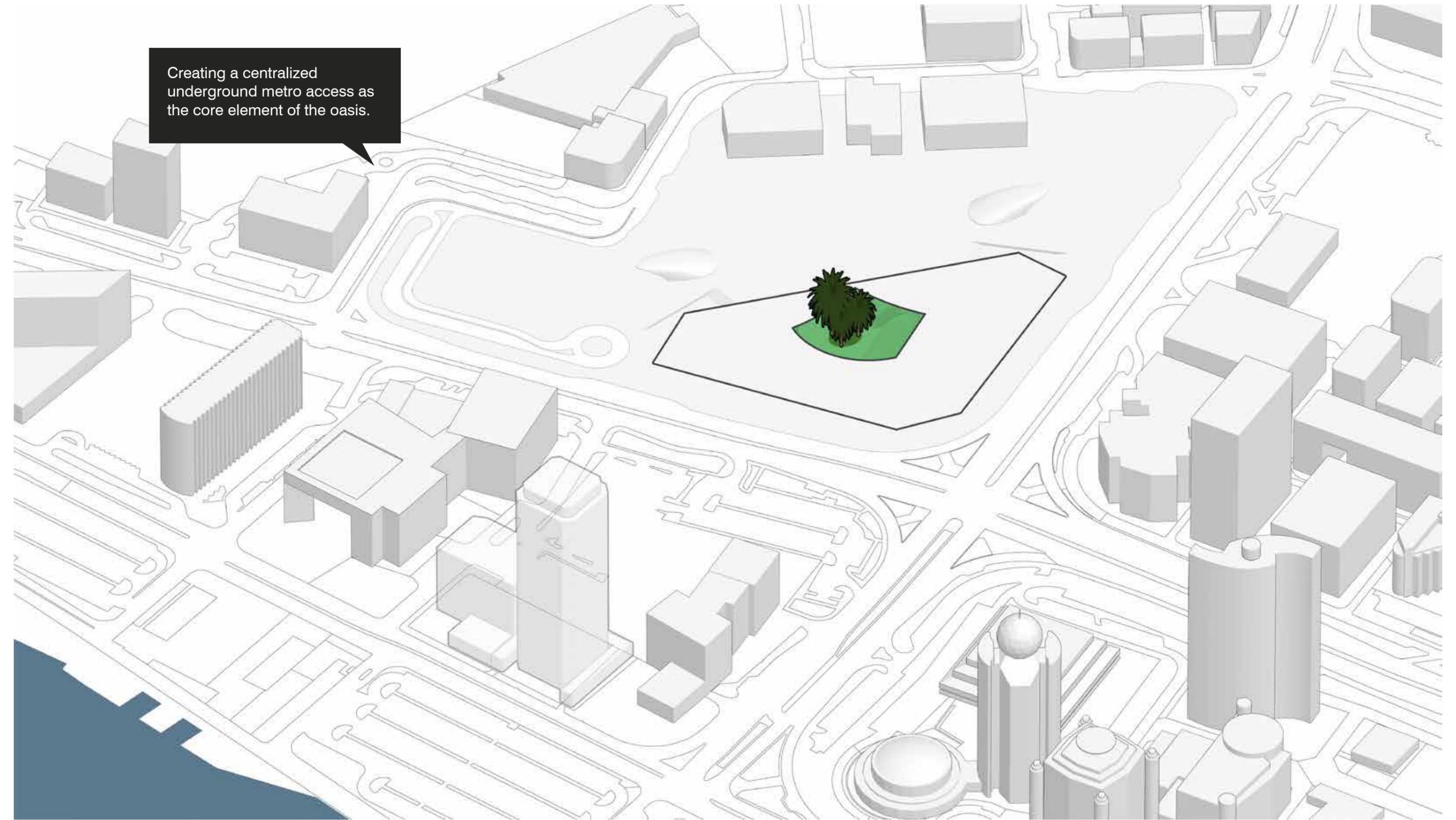
AND AS A MULTIMODAL HUB !

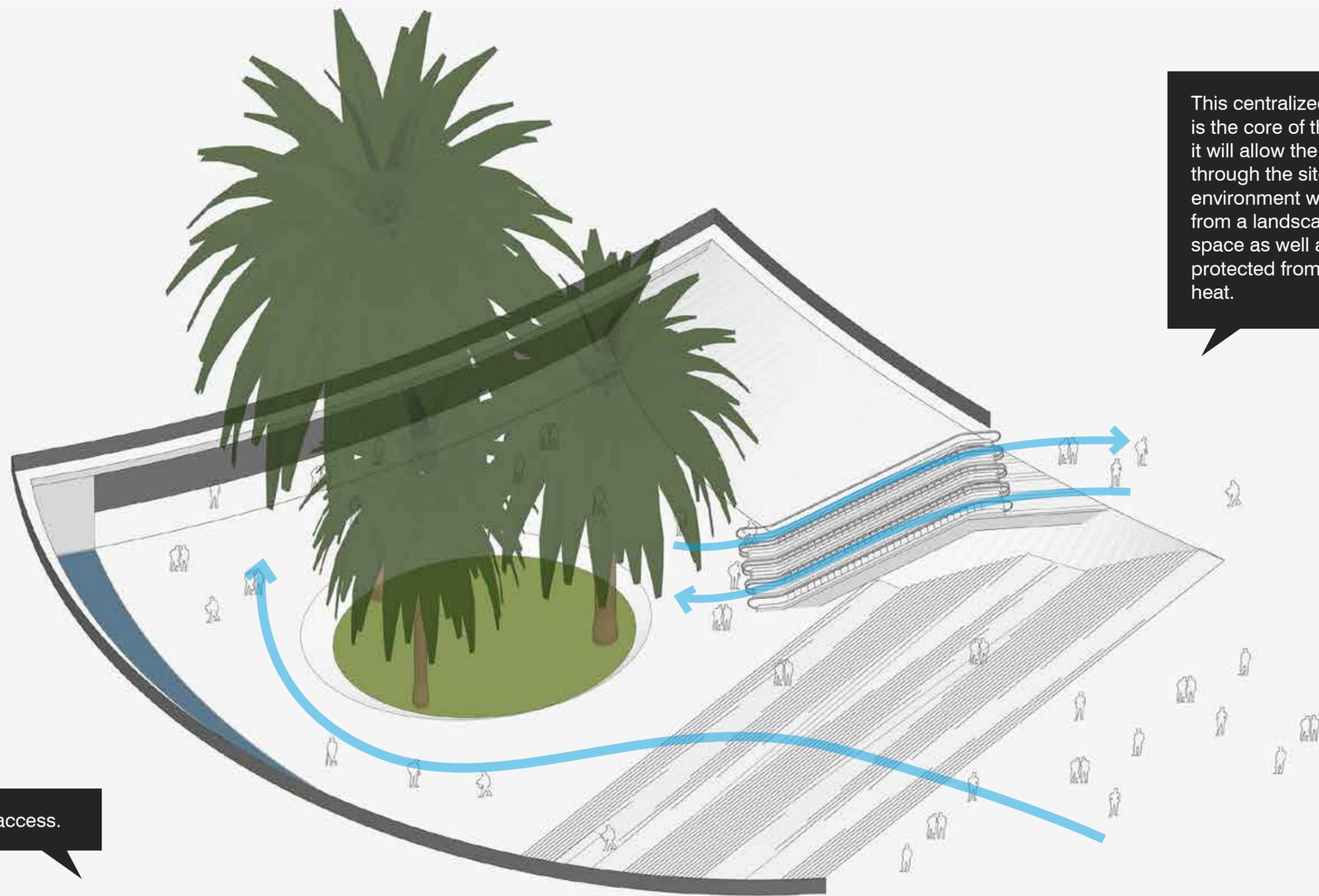
A 3D architectural rendering of the Dubai Union Station site. The scene shows a central area with a large green polygon and two smaller orange polygons. The surrounding area is filled with various grey 3D building models of different heights and shapes, connected by a network of roads. A dark blue area representing water is visible in the bottom-left corner. Two speech bubbles are overlaid on the image: one on the left pointing to the green area, and one on the right pointing to the orange areas.

Dubai Union Station site, today.

What can it be tomorrow ?

Creating a centralized underground metro access as the core element of the oasis.

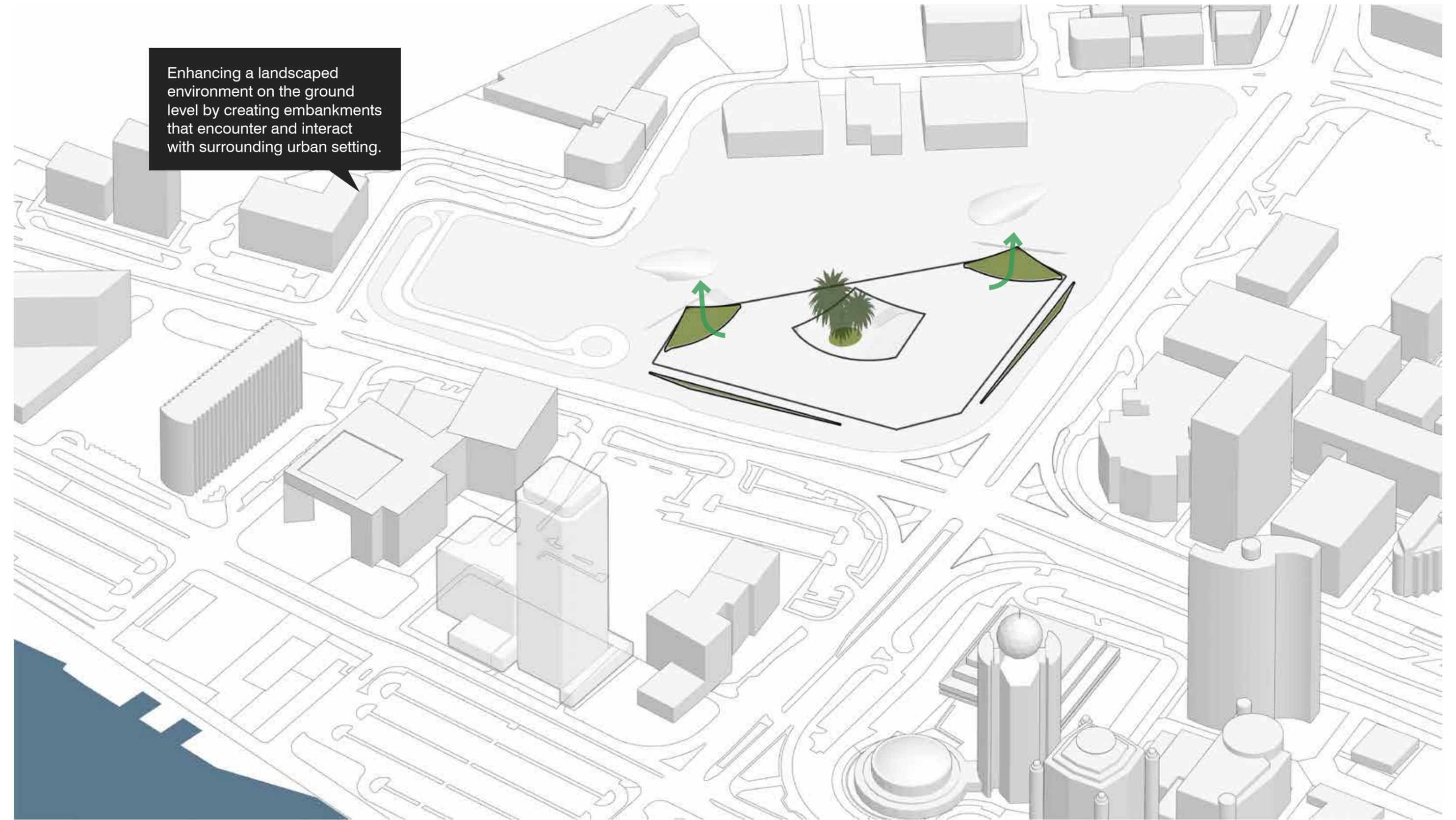




This centralized metro access is the core of the oasis hub, it will allow the user to travel through the site in an engaging environment while benefiting from a landscaped public space as well as being fully protected from the sun and heat.

Centralized metro access.

Enhancing a landscaped environment on the ground level by creating embankments that encounter and interact with surrounding urban setting.



Proposing both cultural and commercial clusters of activities around the oasis. These urban amenities will create a regular source of revenue ensured through commuter flux.



MEDIATHEQUE



LIBRARY & ART GALLERIES



CAFE & RESTAURANTS

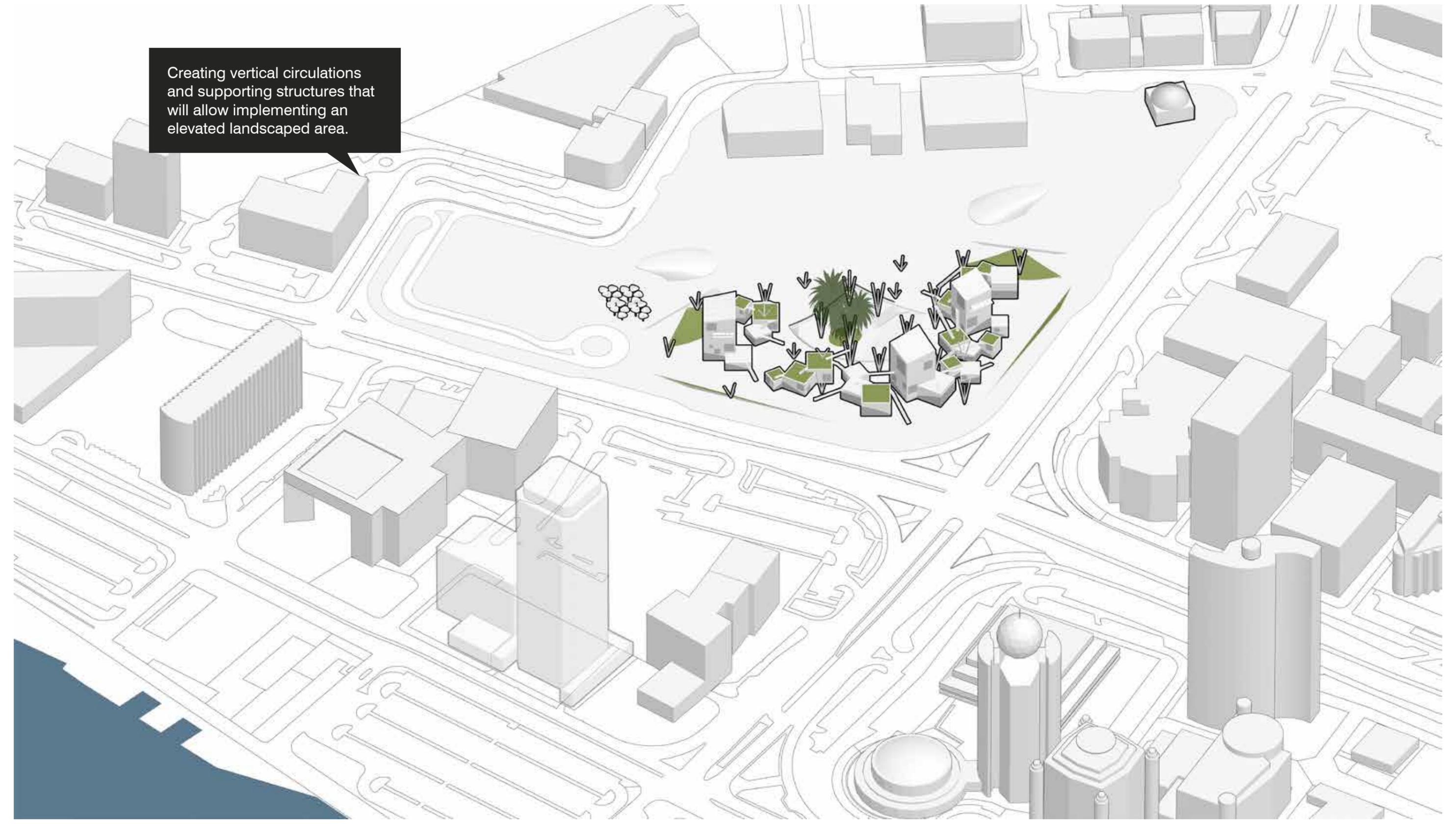


RETAILS



MOSQUE

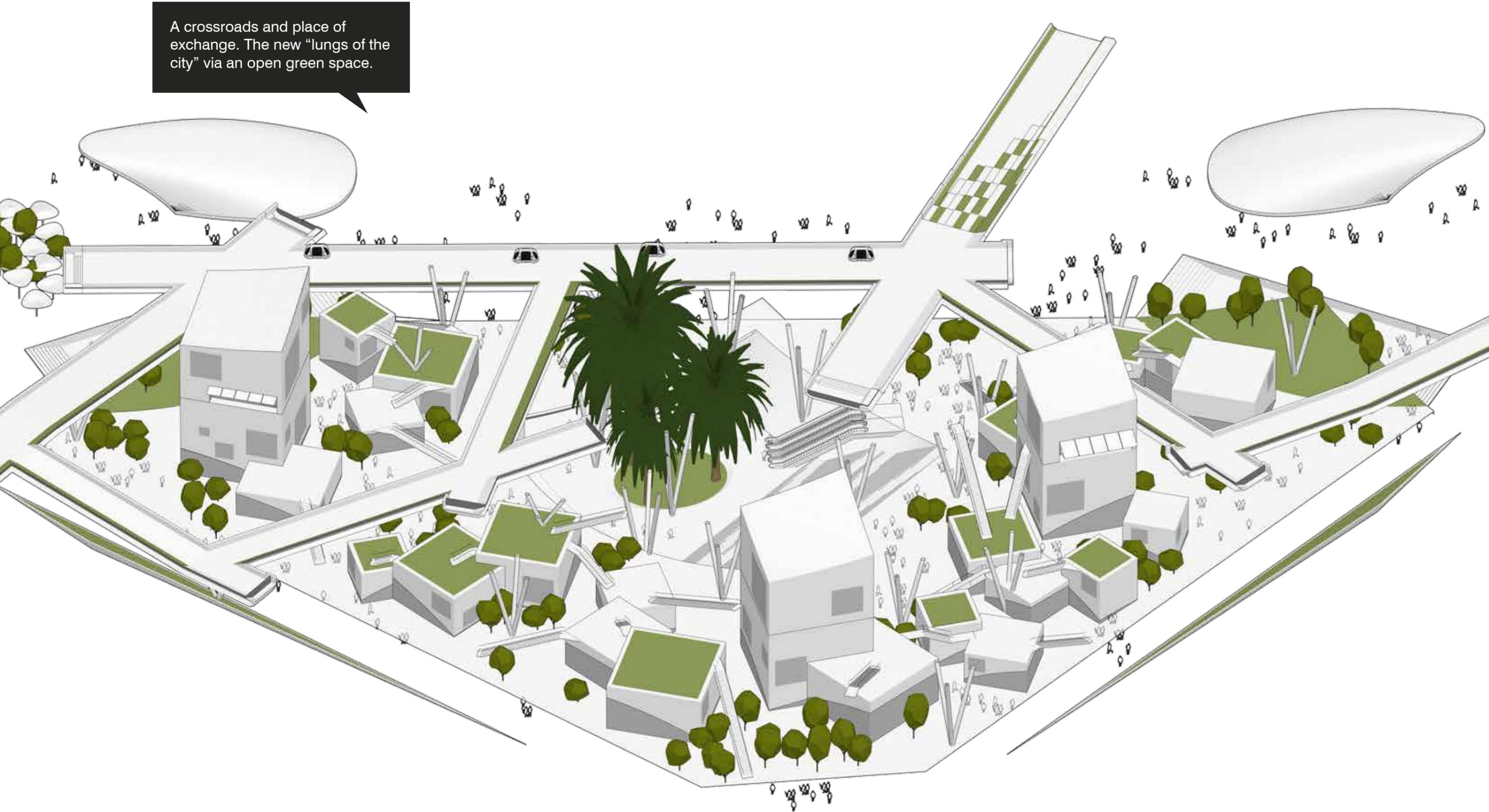
Creating vertical circulations and supporting structures that will allow implementing an elevated landscaped area.



Ensuring the landscaped public space becomes a truly attractive and protective place, providing both shade and a naturally climate controlled environment. Therefore, enhancing the travelers' and visitors' experience.



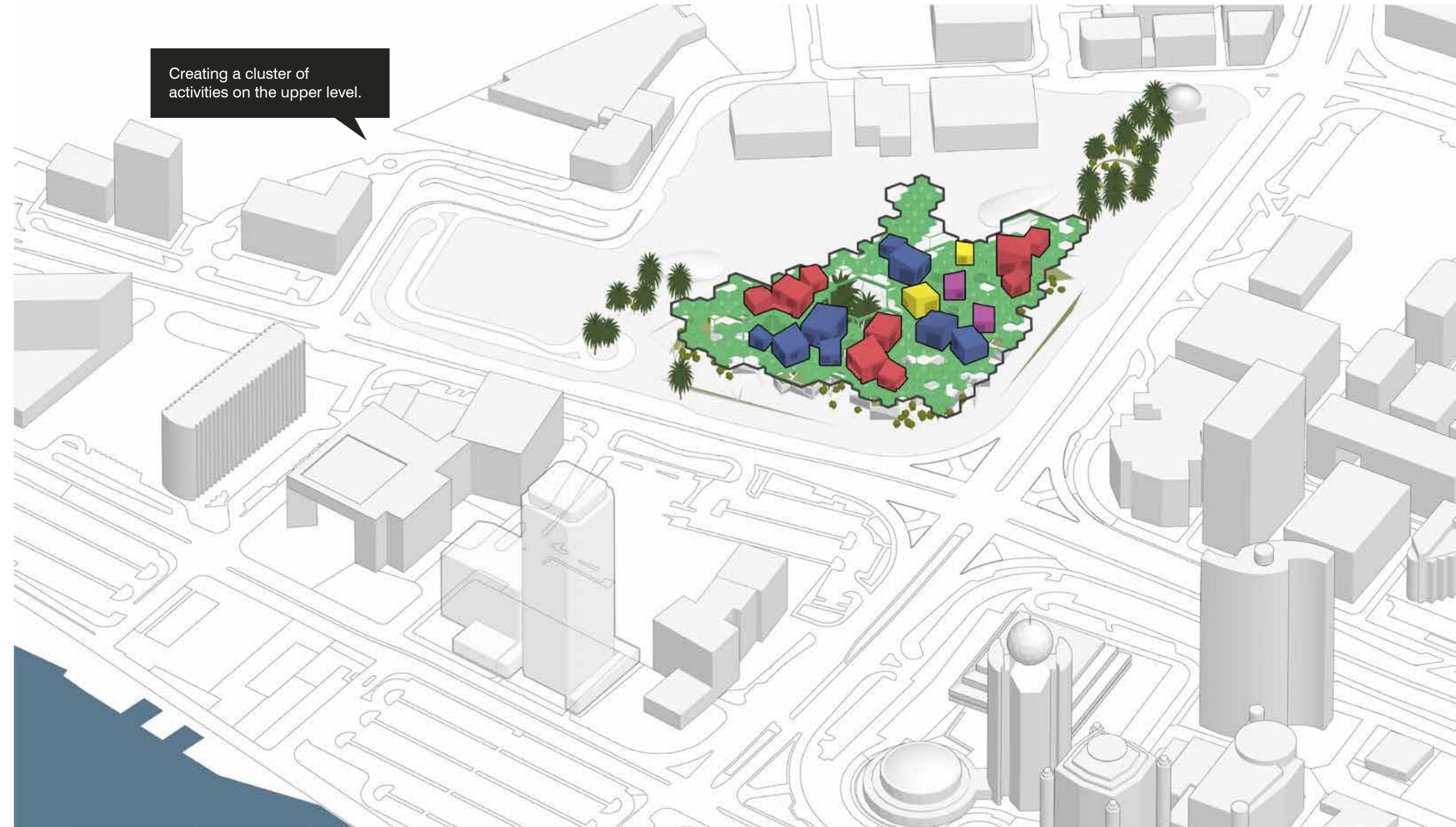
A crossroads and place of exchange. The new "lungs of the city" via an open green space.



Creating an elevated and accessible landscape, which will double the area of greenery.



Creating a cluster of activities on the upper level.



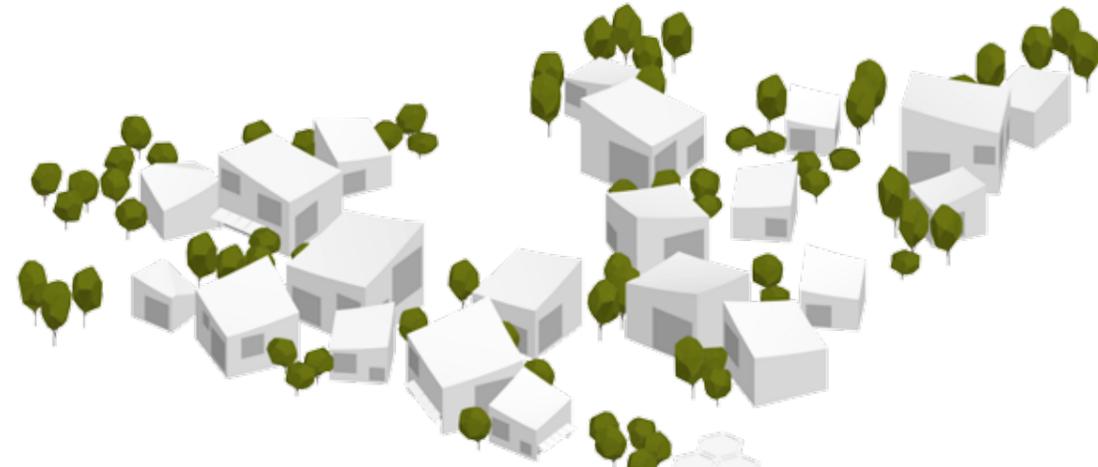
-  CO - WORKING
-  INCUBATORS
-  CAFE & RESTAURANTS
-  RETAILS

Adding greenery to the elevated landscape roof.



A vertical garden that forms a new horizontal profile to the city.

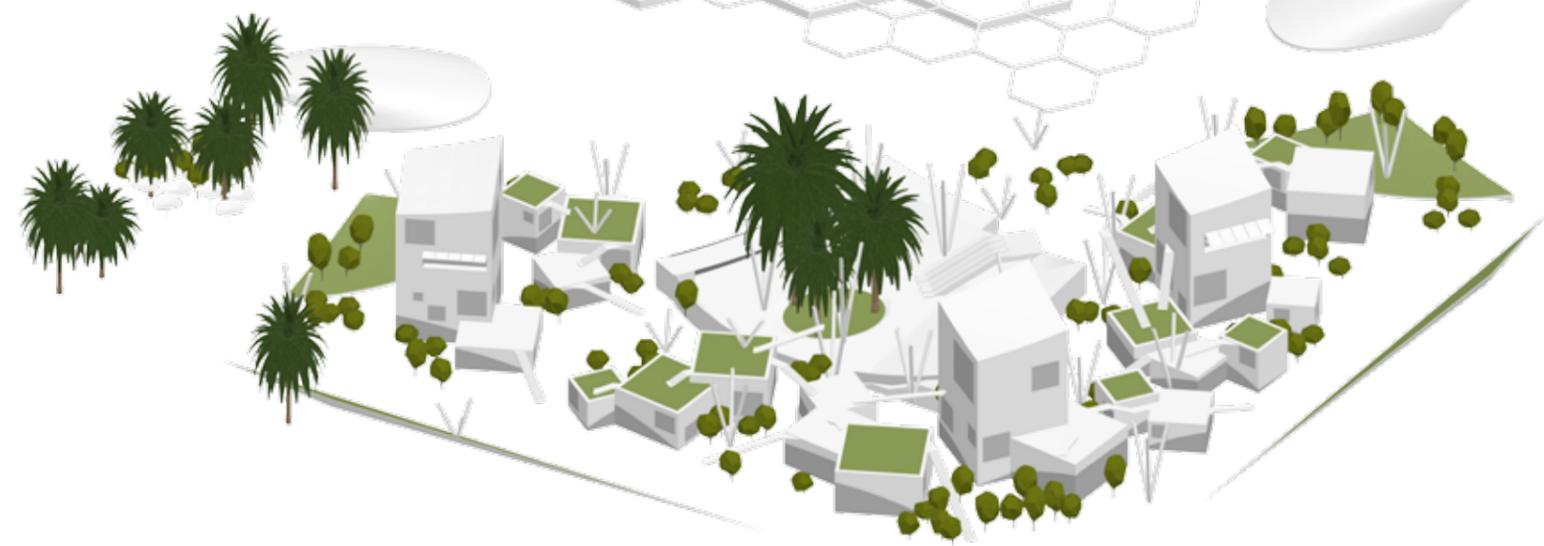




More than 15.000 m² of retails and cultural spaces on three levels.

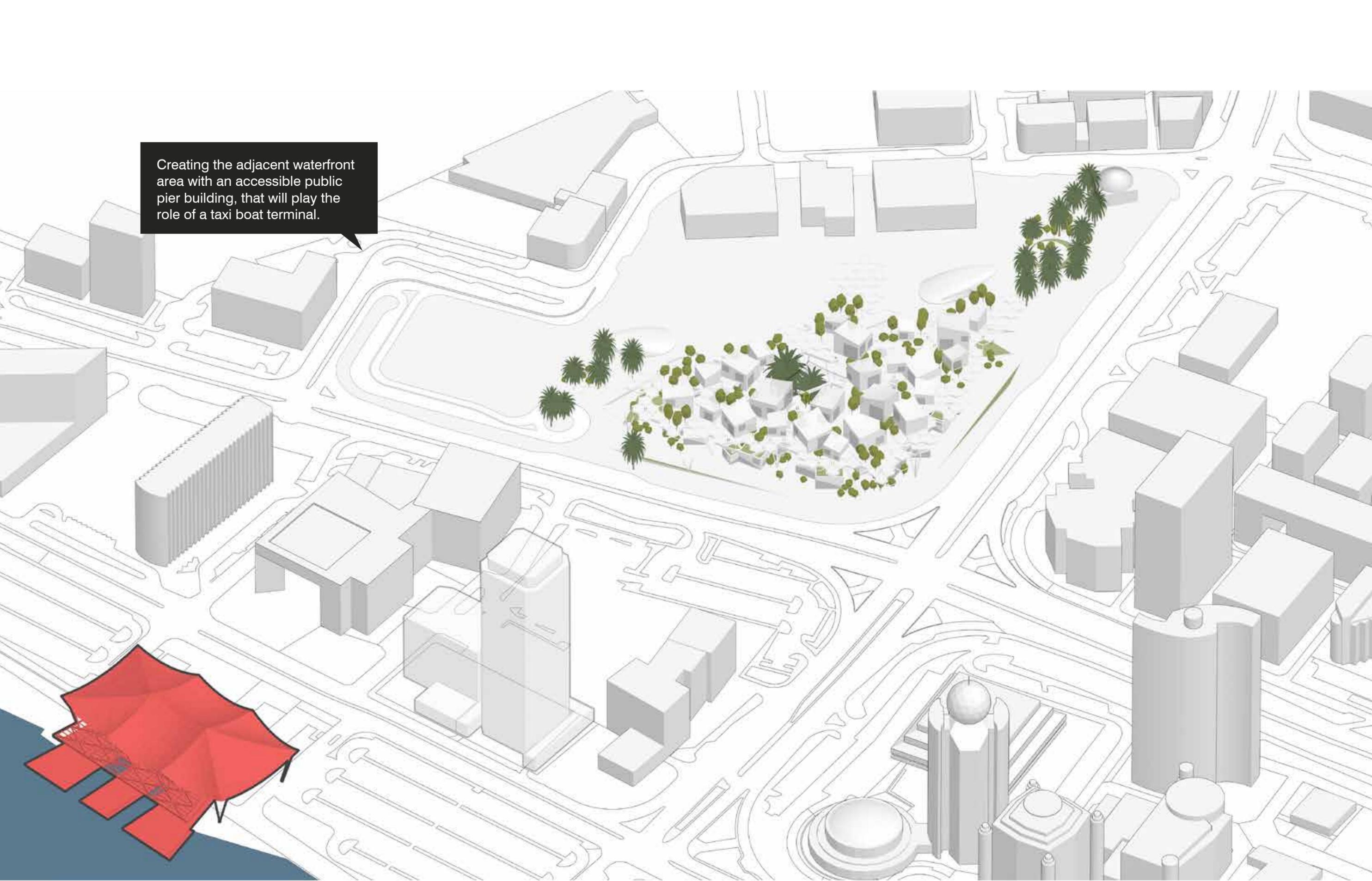


An active roof providing shade, but also producing electricity through solar panels !



A comfortable oasis where travelers can spend time and rest.

Creating the adjacent waterfront area with an accessible public pier building, that will play the role of a taxi boat terminal.



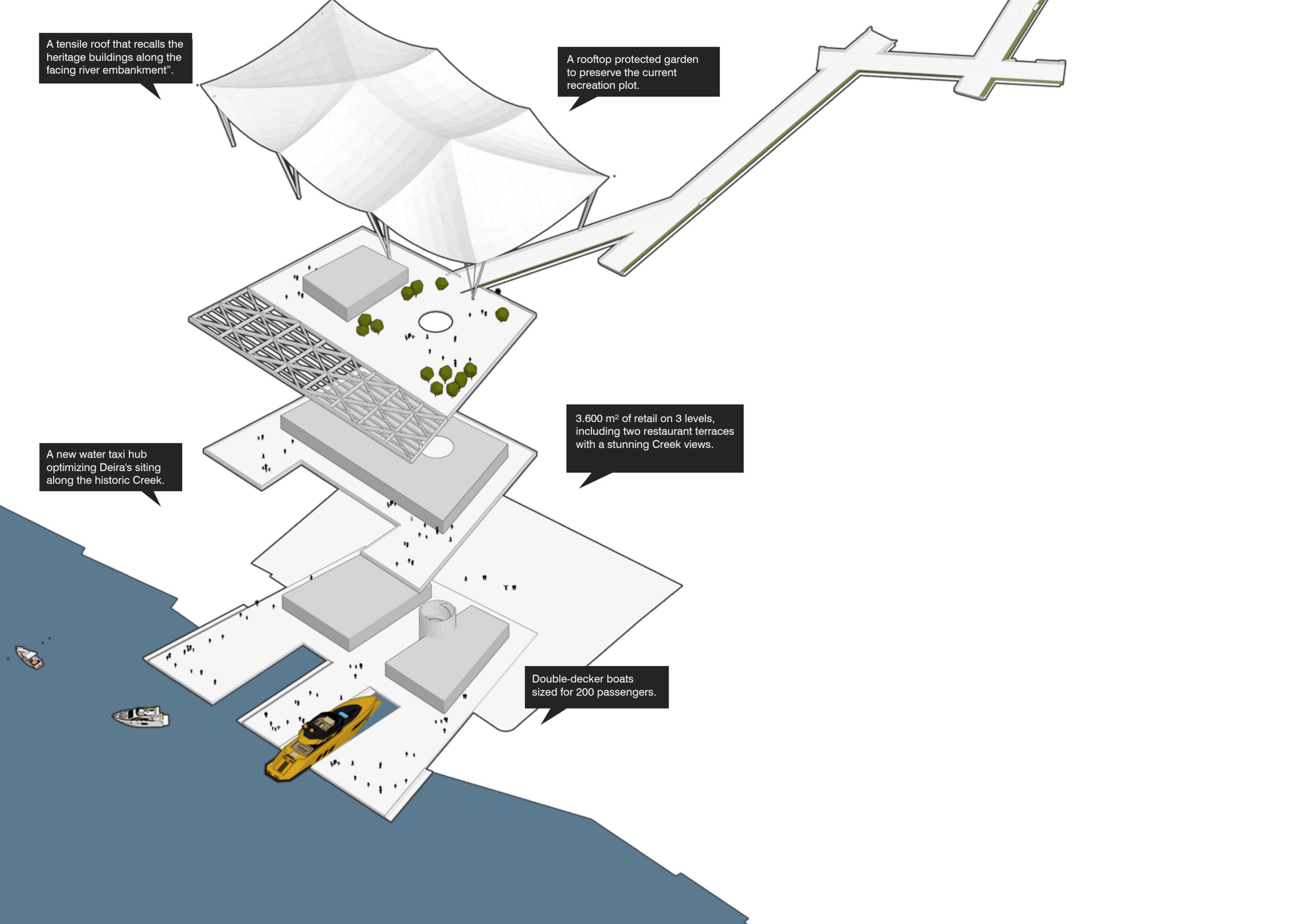
A tensile roof that recalls the heritage buildings along the facing river embankment".

A rooftop protected garden to preserve the current recreation plot.

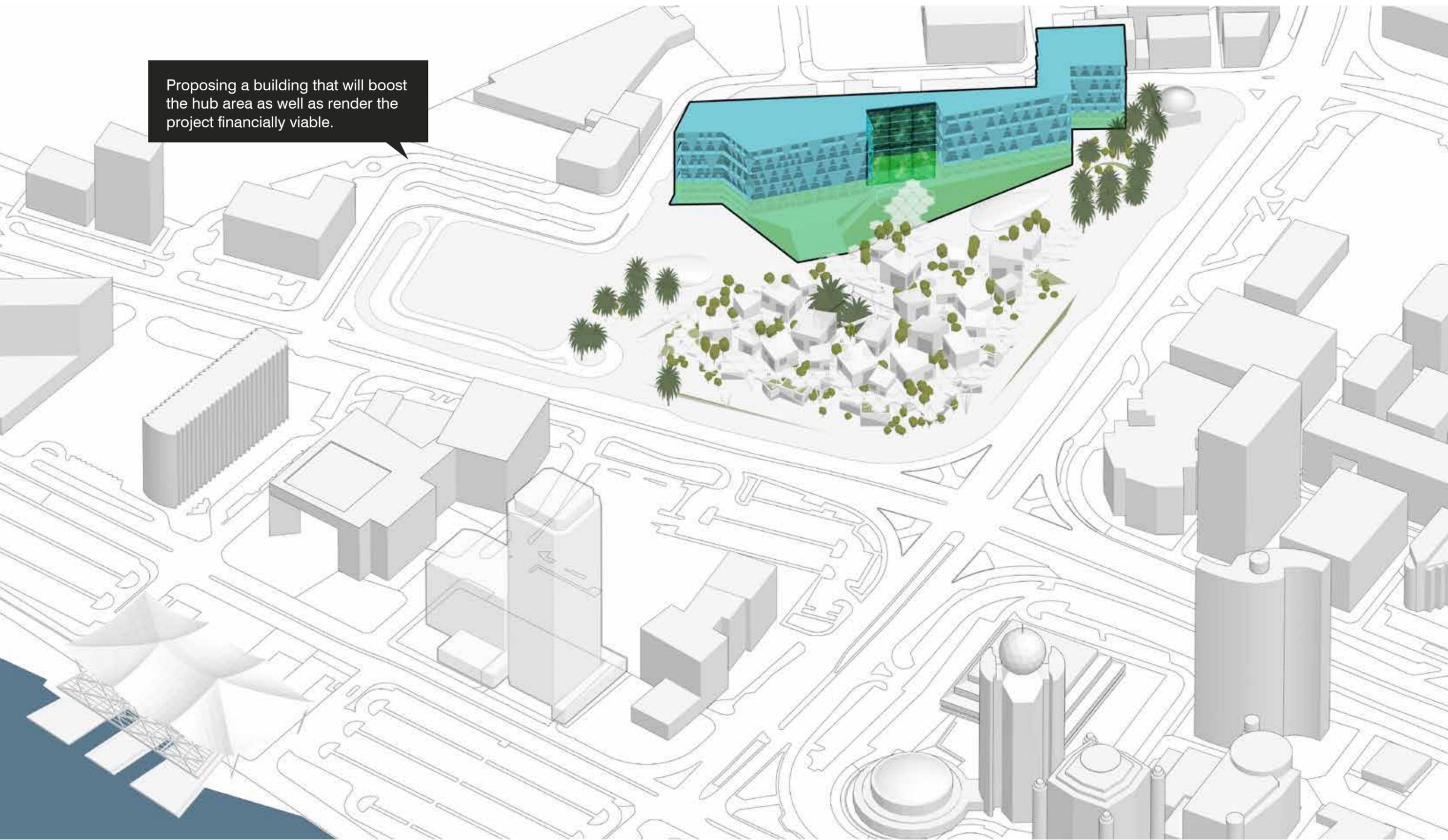
A new water taxi hub optimizing Deira's siting along the historic Creek.

3.600 m² of retail on 3 levels, including two restaurant terraces with a stunning Creek views.

Double-decker boats sized for 200 passengers.



Proposing a building that will boost the hub area as well as render the project financially viable.



OFFICES

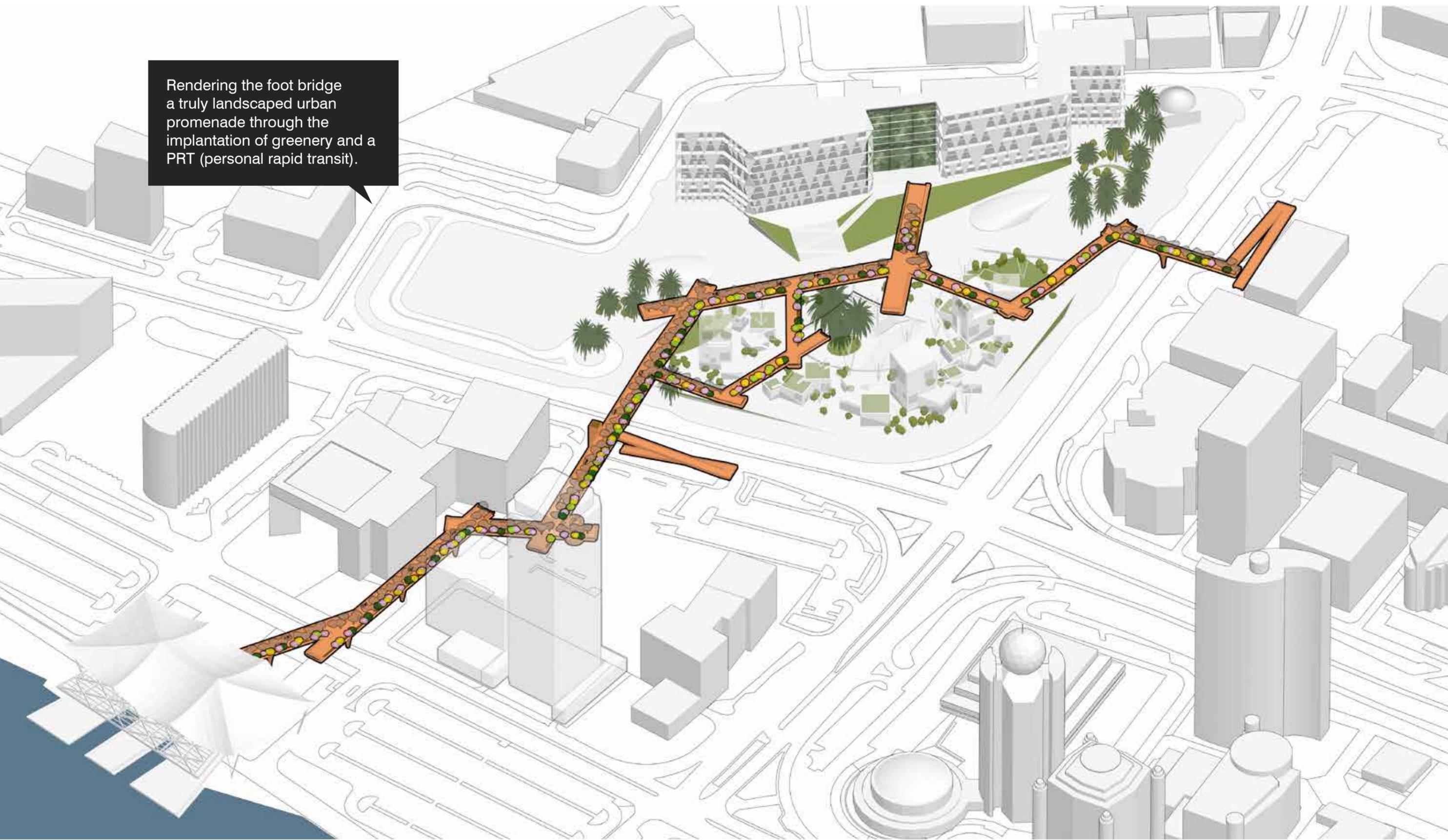


PUBLIC & OUTDOOR SPACES

Connecting all three elements of the project to the central oasis through an accessible elevated and landscaped bridge responding to the specificities of a cross-roads heritage location.

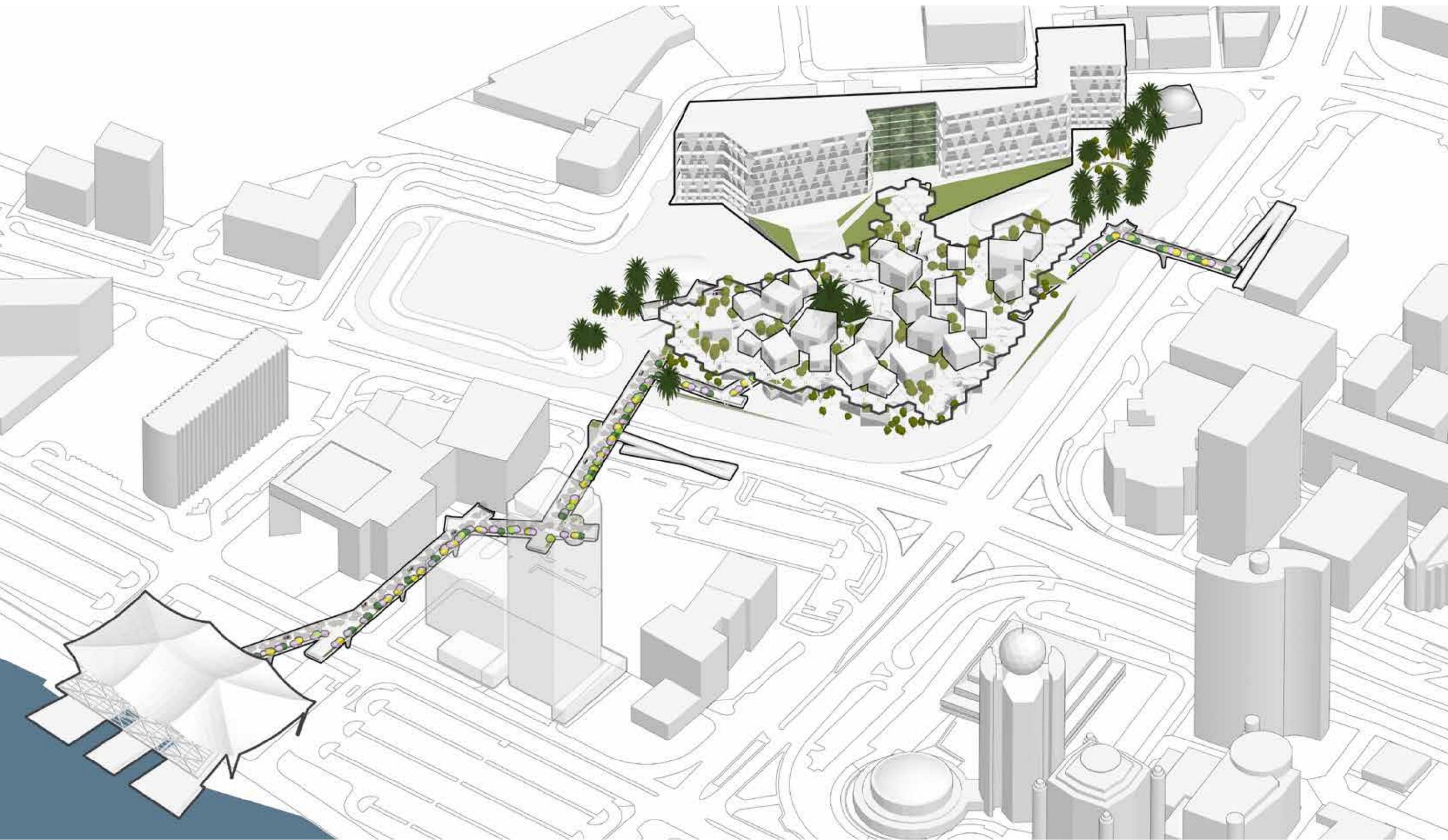
The landscaped pedestrian pathways will help re-connect the fragmented and dispersed areas of the neighborhood.

Rendering the foot bridge a truly landscaped urban promenade through the implantation of greenery and a PRT (personal rapid transit).

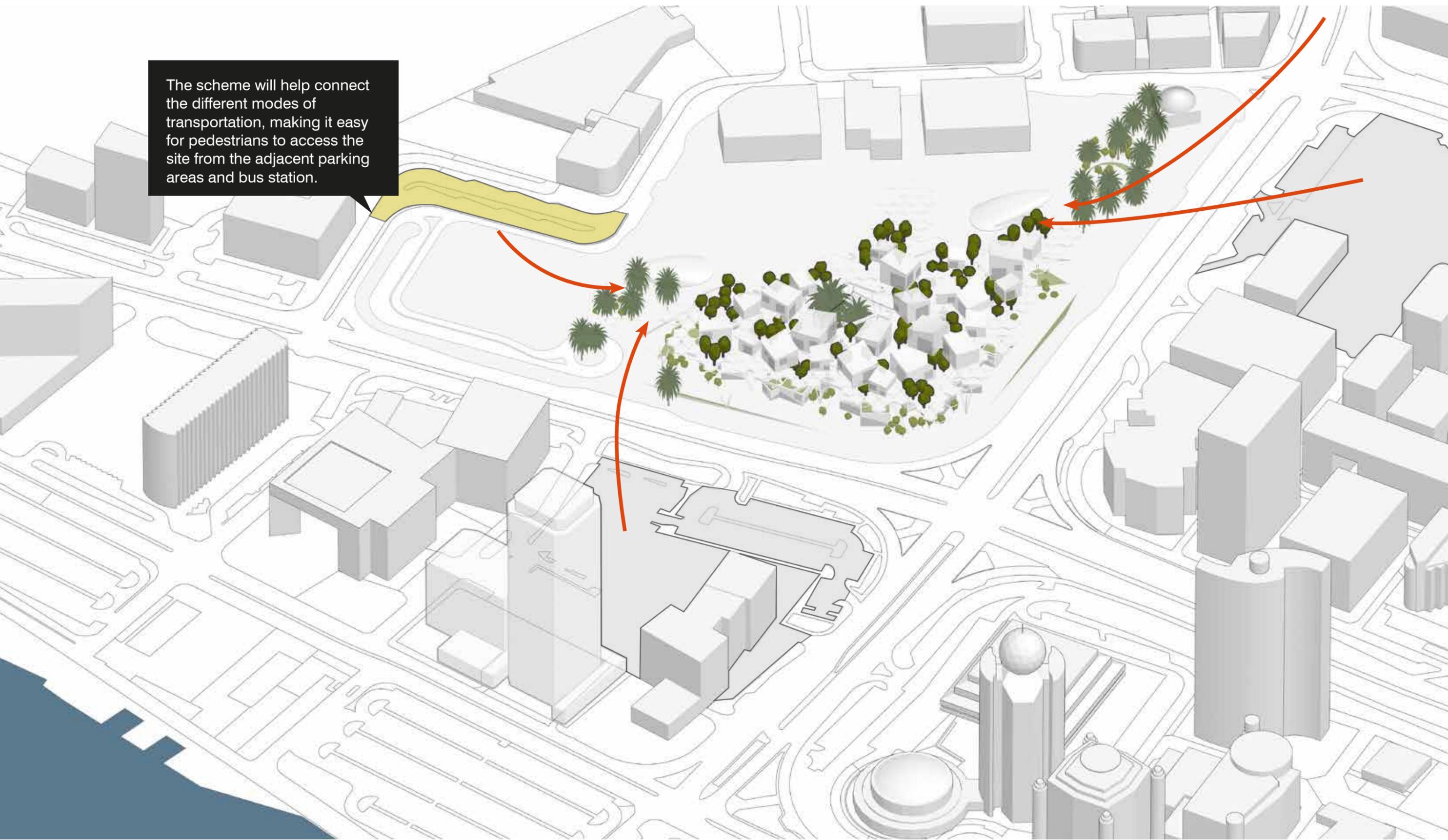


Alternate modes of pedestrian flux - shaded and protected by greenery from road noise – PRT, moving sidewalks, future Gondolas and multiple on & off.

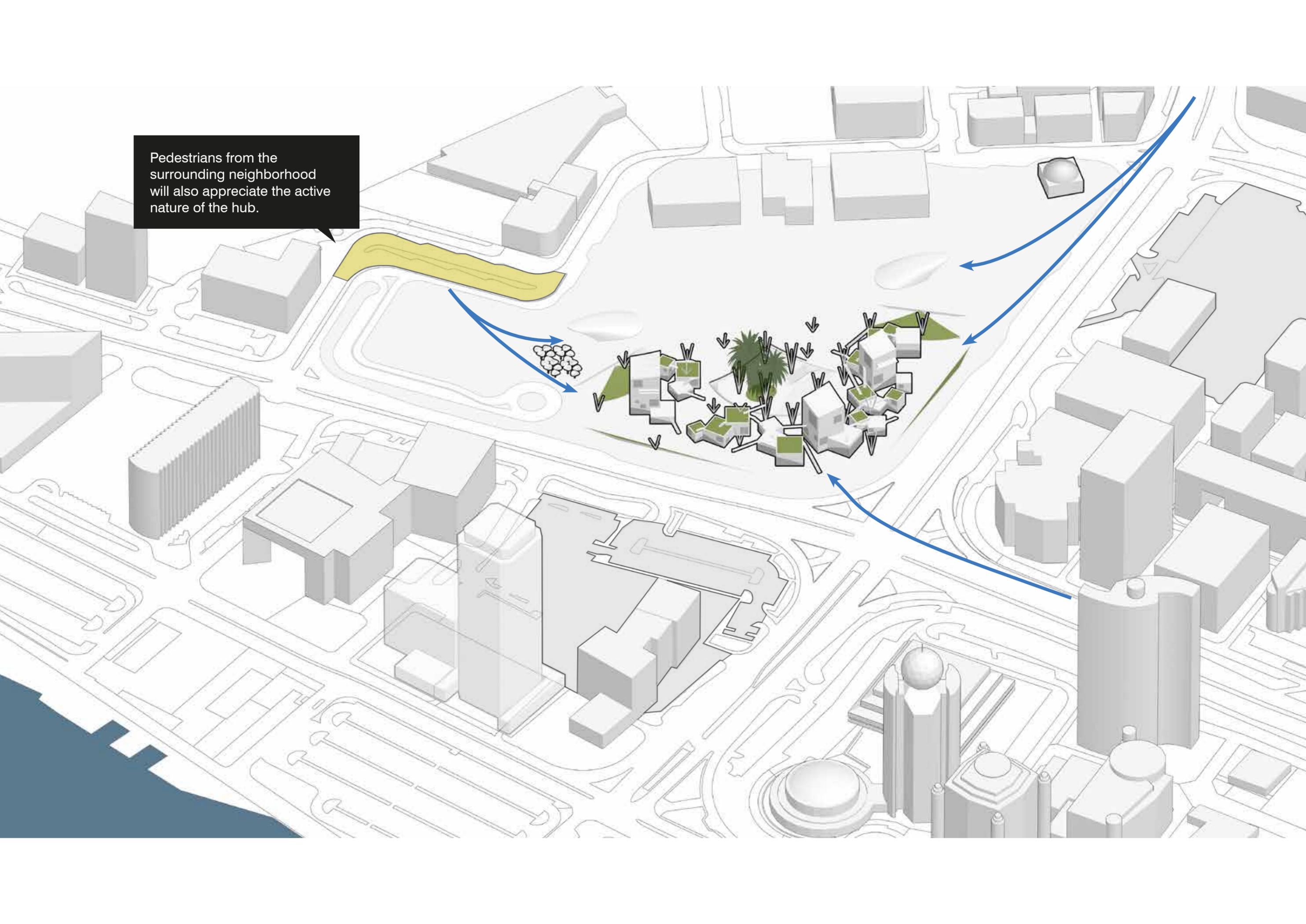




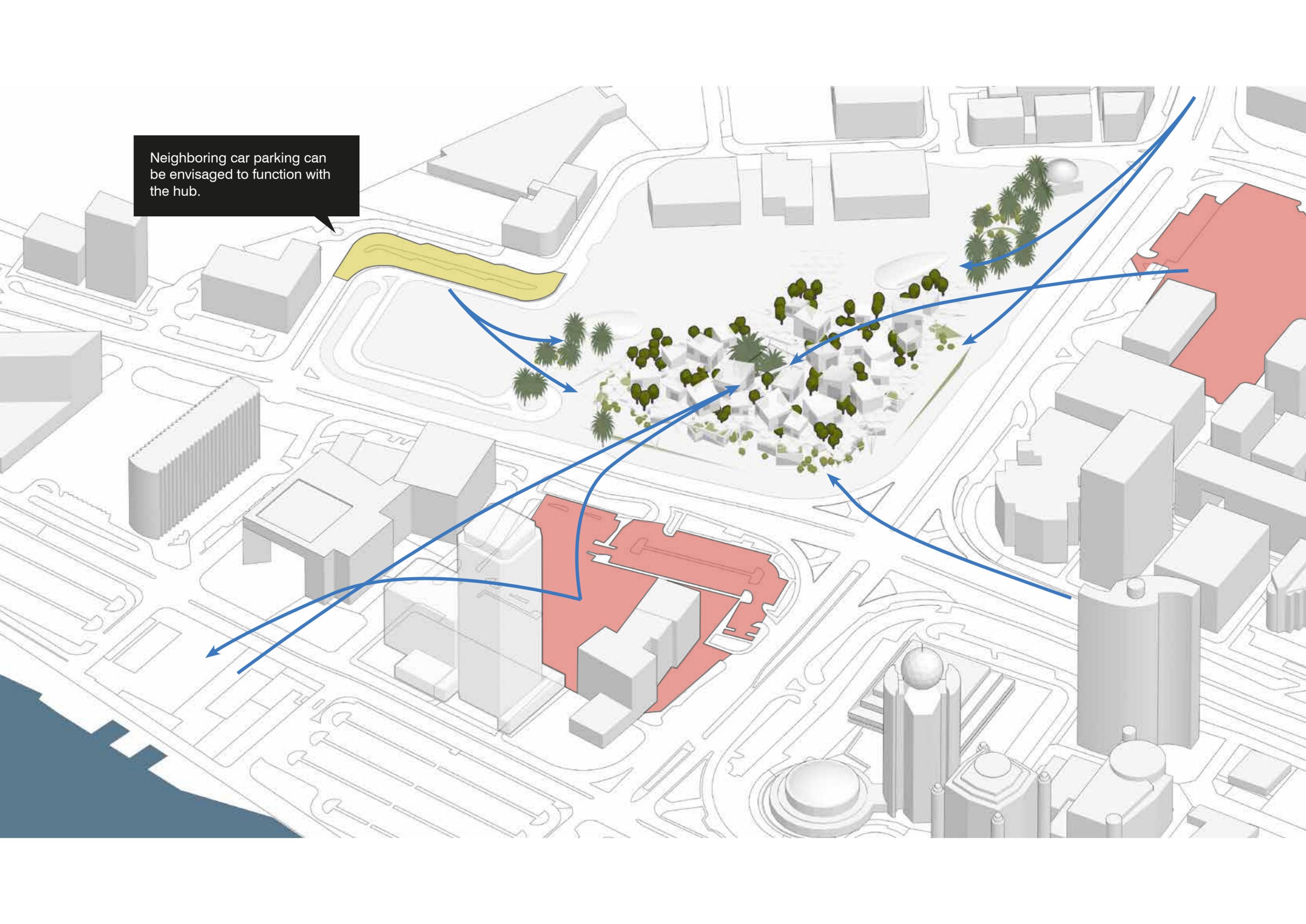
The scheme will help connect the different modes of transportation, making it easy for pedestrians to access the site from the adjacent parking areas and bus station.

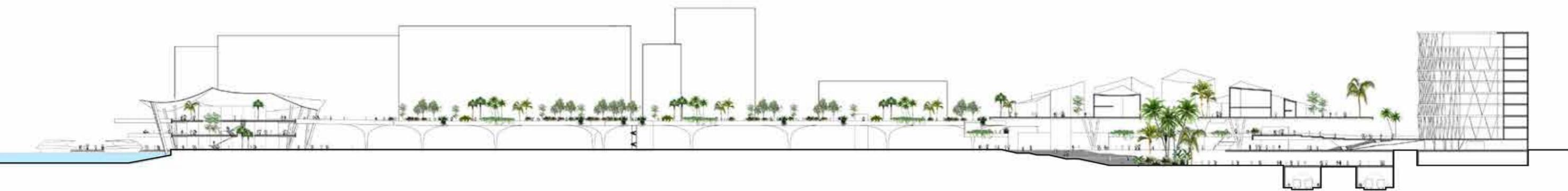


Pedestrians from the surrounding neighborhood will also appreciate the active nature of the hub.



Neighboring car parking can be envisaged to function with the hub.





This new form of covered urban park will use both passive and active cooling systems.

A direct connexion to the underground concourse via the oasis.



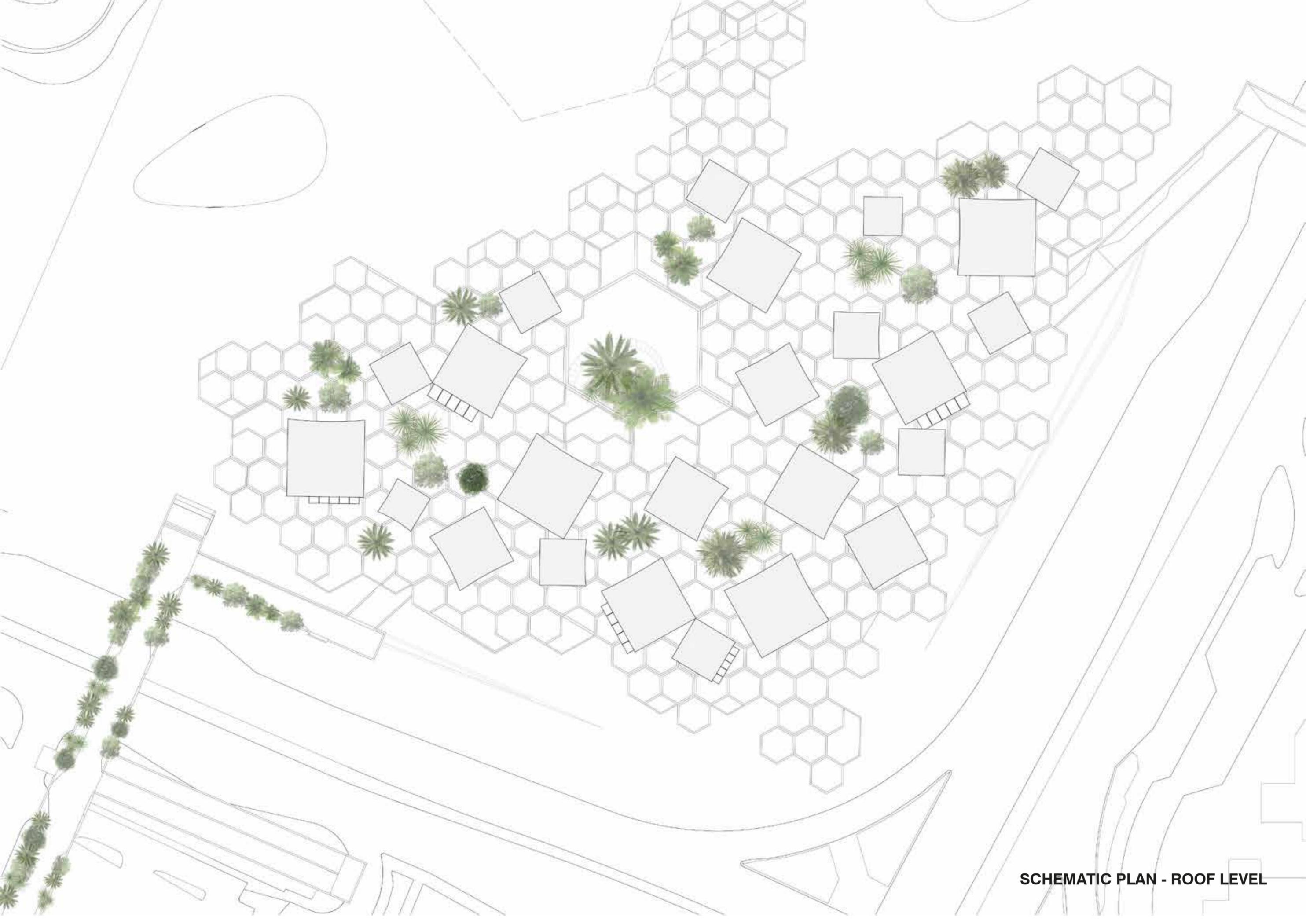
SCHEMATIC SECTION



SCHEMATIC PLAN - GROUND LEVEL



SCHEMATIC PLAN - BRIDGE LEVEL

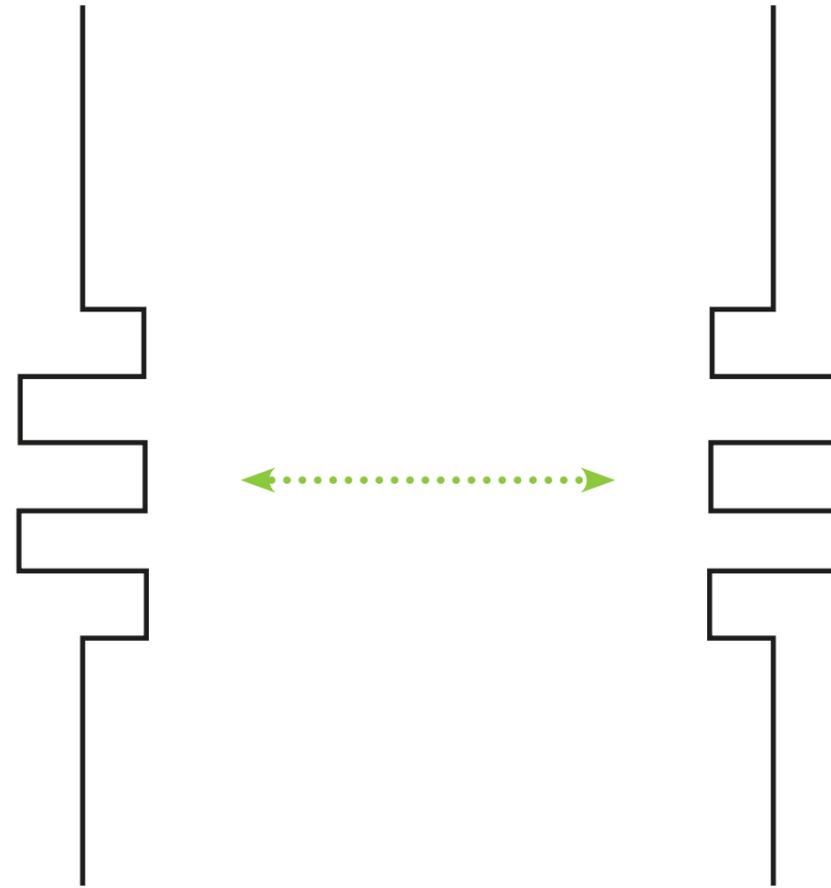


SCHEMATIC PLAN - ROOF LEVEL









CAN A PIER TERMINAL BE A MIRROR OF DUBAI HERITAGE ?







A direct access to Union Station

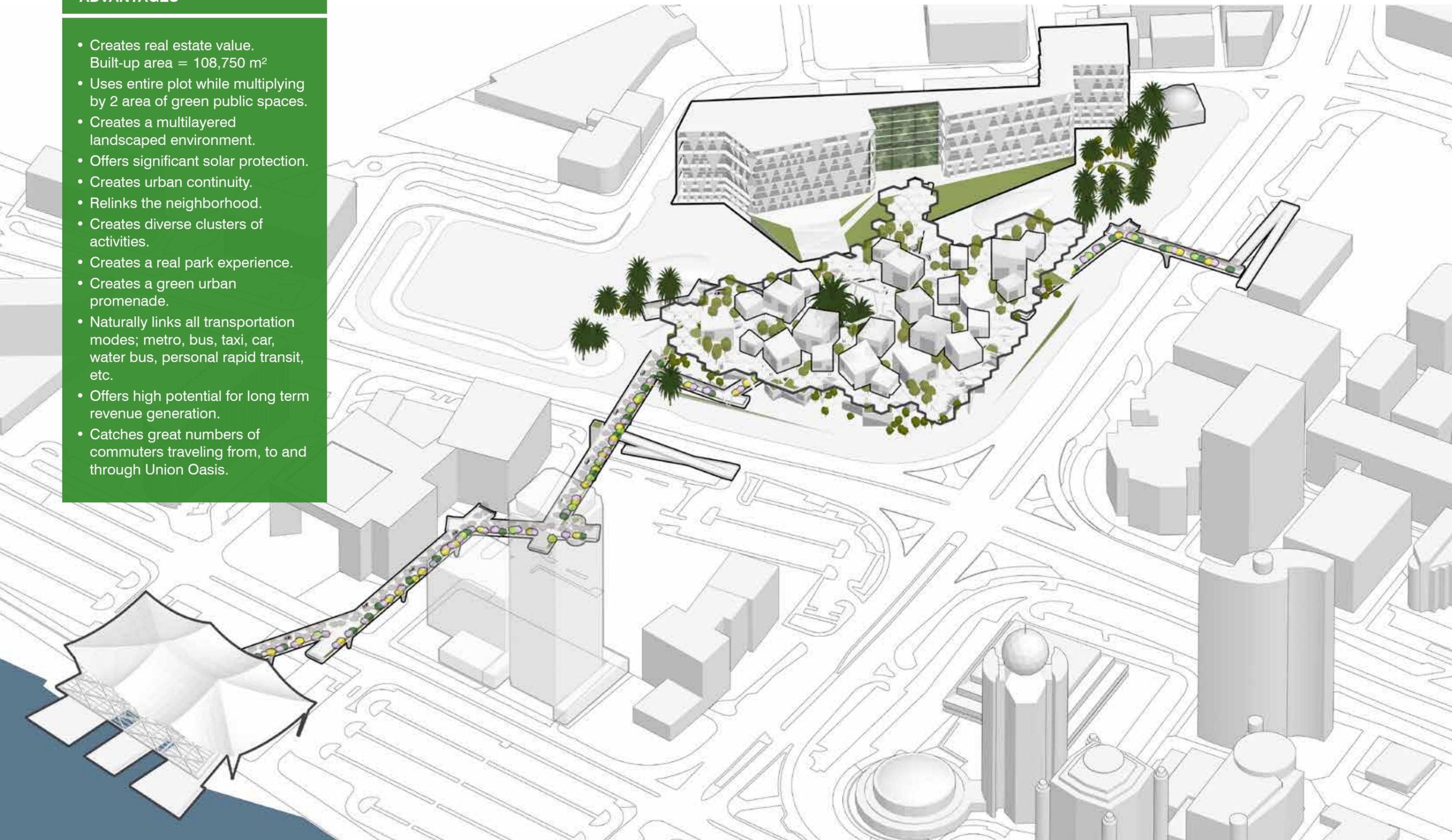




COMPARING TYPOLOGIES

ADVANTAGES

- Creates real estate value.
Built-up area = 108,750 m²
- Uses entire plot while multiplying by 2 area of green public spaces.
- Creates a multilayered landscaped environment.
- Offers significant solar protection.
- Creates urban continuity.
- Relinks the neighborhood.
- Creates diverse clusters of activities.
- Creates a real park experience.
- Creates a green urban promenade.
- Naturally links all transportation modes; metro, bus, taxi, car, water bus, personal rapid transit, etc.
- Offers high potential for long term revenue generation.
- Catches great numbers of commuters traveling from, to and through Union Oasis.



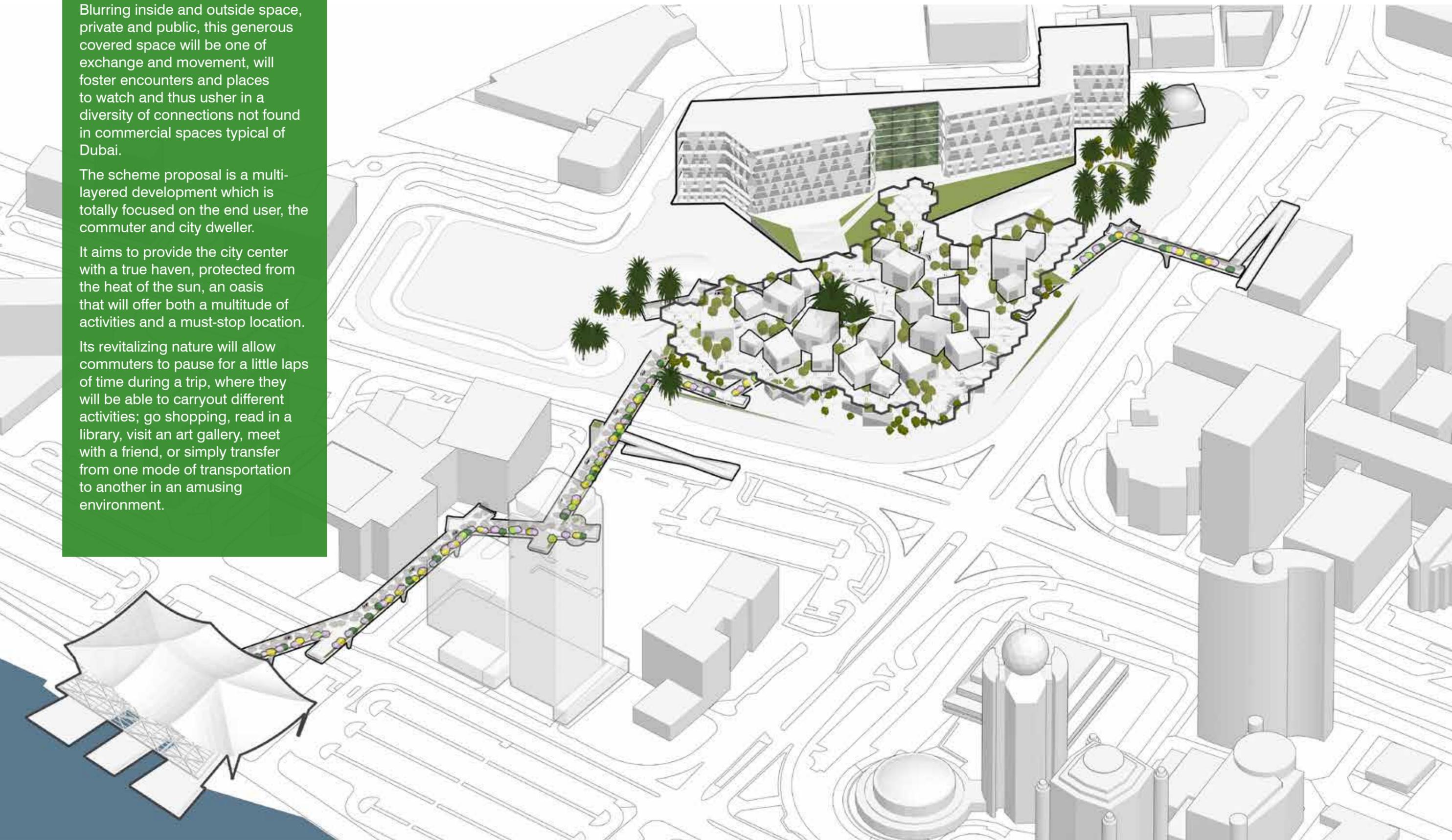
COMPARING TYPOLOGIES

Blurring inside and outside space, private and public, this generous covered space will be one of exchange and movement, will foster encounters and places to watch and thus usher in a diversity of connections not found in commercial spaces typical of Dubai.

The scheme proposal is a multi-layered development which is totally focused on the end user, the commuter and city dweller.

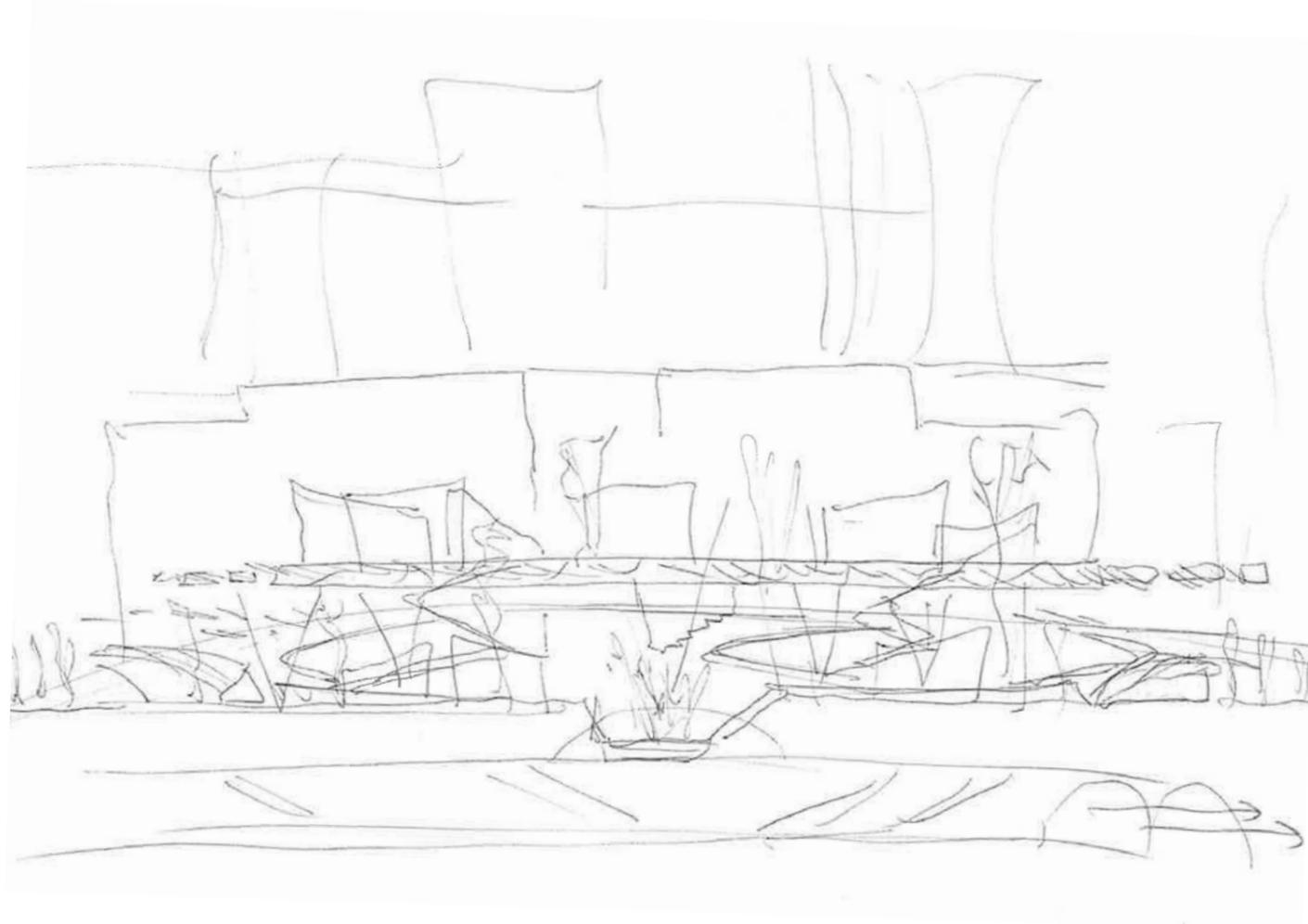
It aims to provide the city center with a true haven, protected from the heat of the sun, an oasis that will offer both a multitude of activities and a must-stop location.

Its revitalizing nature will allow commuters to pause for a little laps of time during a trip, where they will be able to carryout different activities; go shopping, read in a library, visit an art gallery, meet with a friend, or simply transfer from one mode of transportation to another in an amusing environment.



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Client	RTA DUBAI
Phase	Concept Proposal
Cost	Withheld by Client
Date	June 2017



UNION OASIS PARK

A Tim Culbert Design Proposal

Arep Dubai, Consulting Engineers

Urban Mesh as Architecture

A Connectivity Hub for RTA, Deira, Dubai
Design: Tim CULBERT + Arep Dubai

Union Oasis Park: Urban Mesh as Architecture

Between architecture: a suspended park, a cluster of low-rise buildings, and a mobility hub forming a new horizontal typology for the city.

Between architecture a mesh of flux, interconnectedness, causality and opportunities via an open space. Incidental space is a new form of architecture, created by letting "fictional" or "narrative" patterns happen and define the in-between places that link one person or dot to another.

"The space I'm interested in is not only a physical one, but an intangible, metaphorical and psychological one. For me, space is that which encompasses everything. So in that sense, one could say that my art looks at diverse forms and media through the prism called reflection on space" (Suh, 2003)

Like Suh works, which blurs the boundaries and conventional definitions of an art object through his fabric sculptures that are transparent and permeable reconstructions of transitional structures - doorways, stairs or hallways from his memories - we approached RTA's Union Station site as a space of permeable transition, equally blurring the boundaries between classic spaces of mobility, and of private and public space. This lent us to relook at early prototypical models for "new cities" - utopian drawings by Yona Friedman, Cedric Price, Archigram, and the Japanese Metabolists who had all envisioned some form of raised hovering cityscapes as solutions to rapid urbanization.

Not unlike Yona Friedman's Ville Spatiale of 1964 - the project aims to establish a horizontal skyscraper, an elevated city liberated from the constraints of the transportation ground plane. What Yona missed was the importance of creating a new green space in his floating 'urbanisme spatiale', as we have done here.

The skyscraper however had a 1/2 century lead on these visionaries, and the horizontal ground-scraper was thus never realized. In the context of Dubai, where densification in an endless sea of sand has taken root at an astonishing rate, it is worth reopening this typology in a new format, to respond to the specifics of a cross-roads heritage location, where the need for both shading and efficient horizontal movement and connectivity is needed, rather than another singular building.

The puzzling challenge we found in look at Deira, is the lack of connectivity to a network of points across a large district - each distinct from the other. The opposite than what a TOD is to be and that we is needed here, but in a new form. Thus, we connected the dots.....and created architecture between these incidental, interstitial zones. It is the analogy of the mesh that suits us better: it is between and within things that enable activities, movement, life to happen. This is causality that we are facilitating - where things are able to happen or not happen. The mesh is thus the mass, the support and the mask to a system of movement and being.

It is the problem posed by the site - spread out movement patterns to opposite ends of a very large urban site, as well as a major underground train interchange, significant unshaded walking distances to parking and canal front water taxis - all defined a non-building typology that has yet never previously been imagined: a horizontal mobility cluster. A suspended mesh between architecture and landscape. An Oasis. Oasis park and public spaces, to paraphrase Thomas Schropfe, are places that offer more than (shade) and greenery. 'They are, in virtually all of their cultural contexts

across the globe, the great "levelers" - places to which, if they are made truly accessible and just, provide the proverbial stage on which people of different backgrounds can interact. One may also understand parks as a "release valve" or "breathing lungs" as an outlet to this trend towards more and more hardscape and urbanization. The provision of innovative dense and green building types in combination with parks and public spaces can provide large urban landscape ecosystems, which are among the most promising strategies for making our cities more live able.'* Such environments lacking in Dubai, encourage long stays by visitors and increase income generated via F&B and retail.

The concepts of spaces of mobility as AREP is known for, is based on functionality: flux and efficient movement through a transit hub or TOD. This is a about the shortest time/shortest distance between two points.

Rather than taking this approach - mostly to do with the spread-out nature of the site over several hundred meters, linking pedestrian, subway and boat traffic - we approached this project based on "qualifying" the visitor experience - experiential and health wise (a walk in the park in shade) and economic (F & B offerings) in the links between multiple platforms & forms of movement and pause opportunities. To walk and wind one's way through this space, a cluster of mixed programs, is fundamentally a social experience. The general idea is that you move from one platform to another, one means of transport to another - from subway trains to automated cars, from pedestrian people-movers to water taxis - via a maze of greenery as the background to a new form of covered urban park.

Our project for Union is a large suspended roofscape providing both shaded mobility space below in a form of an oasis, and tightly clustered volumes of "opportunity" above, hemmed in together to blur inside and outside space, define green spaces and create shade, and playing light and color between adjacent building volumes due to sun orientation. Facing due South, our challenges are high to create such spaces both under and above this floating roofscape.

Our project thus does not attempt to provide the lowest common link or common denominator between the multiple users and transport modes, but to allow forms of movement and space full of complexity, of layers: variation in routes via an open public space for the regeneration (health) of the user, filled with shade and vegetation.

This is a large spanning roof, but its function is straightforward: to bring together disparate and separate activities and movements. It is a landscape device to create a strategy for a new public spaces at the ground level, and floating above the cityscape in Deira. The volumes above and below our roofscape, are like public living rooms, with various forms of activities and opportunities - a new economic model to be fostered. It creates a multi-level garden horizontally and vertically. A type of jungle-gym of stairways linking the multilayered park-scape that zig-zags through this multistory space, providing public throughways not generally found in Dubai.

This is a place that combines opposites that enrich life: stillness and a rush of movement; a raised park to pause and an open cluster of activity poles; an interchange mobility hub - both fast and slow - and a new economy resource incubator - catalyzing an urban park as an oasis of opportunities. A three dimensional city or a hanging terrace that hovers above the green public space and mobility interchange. The boundaries between the natural and the man-made, inside and out, are blurred: This is a new form of public space. Blurring inside and outside space, private and public, this generous covered space will be one of exchange and movement, will foster encounters and places to watch and thus usher in a diversity of connections not found in commercial spaces typical of Dubai.

A dynamic play of light and shadow is created by this expansive roofscape - a shaded green space, the breathing lungs for the city. This roof addresses solar orientation and need for greater projected or shaded public mobility and green space offering a high level of shading over the southern facing site and providing a high quality of thermal insulation. Thus, the project is sustainable. Low rise - predominantly horizontal in a city aiming for towers - respecting Dubai Municipality urban plans and responding to RTA's future vision plan allowing for development of automated drone drop-off / pick-up on site.

The Union Oasis concept reinforces visibility and new underground link to existing subway concourse level while providing a green oasis at the street level and suspended above. It encourages the link to waterfront pier / waterfront mobility routes via a building that respects the historical legacy of that waterfront. At an urban scale the clustered volumes and the waterfront terminal are shaped by the curving forms of traditional Bedouin tents anchoring the project in the cultural heritage of the canal site of old Dubai (.....or Deira). The project serves to mirror the remaining historic buildings on the facing bank.

- the economic feasibility would suggest at this interchange not housing but an Economic / Financial Hub: IT - Co-Working - Start-up - Culture - Next Generation Enterprises funding supports and pitching spaces.

Back Building....

direct link to a commercial media and IT Hub in adjoining linear building

It's a network project of all forms today and in the future for human movement. That is what makes the project unique. It's not a TOD but a CPH - Concentrated People Hub - that today does not exist and is entirely dispersed across a large district. We are thus facilitating connecting the dots that are fragmented, whether foot, bike or automated drone traffic. The Transit interchange this there. The development around it will come only from creating a connector throughway - our layered roofscape of flow patterns - to make them viable.

The multi-nodal interchange as an oasis: a public living room that serves as the lungs of the city. It will be thus a sustainable model for RTA and this site in Deira.

T. Culbert