VERTICAL NEW SPACE

Evolution of the skyscraper and its urban function in Hong Kong

垂直新空間

香港摩天大廈的演變及其城市功能

VERTICAL NEW SPACE

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簡介

Verticalità come conquista dell'uomo, innalzamento verso cielo che trova la sua materializzazione nel grattacielo. Una continua lotta contro la gravità, che ha spinto l'uomo a costruire edifici sempre più alti, sperimentando tecnologie sempre nuove atte a soddisfare questo bisogno di verticalità: potere, difesa o il divino, sono molteplici le ragioni che hanno portato alla nascita di questa tipologia architettonica. Il lavoro di ricerca parte con lo studio del Grattacielo come elemento architettonico e urbano. Analizzandolo sia nel suo aspetto intrinseco di città nella città, che in rapporto al tessuto urbano dove la verticalità incontra la sua dimensione orizzontale, ed è quando l'edificio a torre incontra la città che si inizia a parlare di vertical city. Uno dei paradigmi dello sviluppo in altezza della città è Hong Kong, scelta perché la sua aspirazione al cielo non è dovuta ad una dimostrazione di potere e di conquista, ma rappresenta l'unica soluzione di crescita in una metropoli in cui l'espansione orizzontale non è possibile. Questa limitazione territoriale ha reso la capitale asiatica un laboratorio a cielo aperto sulla verticalità, dove si è evoluto il concetto di grattacielo, da semplice torre, ad elemento urbano complesso fino alla nascita delle megastrutture. Attraverso una ricerca sul campo si sono delineati i pregi e i difetti di quest'evoluzione tipologica andando ad individuare infine il rapporto tra persona, grattacielo e città verticale, dove in un'estrema capitalizzazione dello spazio disponibile non è stato conservato lo spazio pubblico, che invece viene creato spontaneamente dagli abitanti. Il risultato finale della ricerca è un metaprogetto frutto delle analisi effettuate, dove si ha una totale apertura del grattacielo verso la città, andando ad accelerare il processo di verticalizzazione già in atto, inglobando lo spazio pubblico nella sua crescita verticale.

INTRODUCTION • EN

簡介

Verticality as man's conquest, elevation to heaven that finds its materialization in the skyscraper. A continuous fight against gravity, which has pushed the man to build taller and taller buildings, experimenting new technologies to satisfy this need for verticality: power, defense, or the divine, many reasons have led to the birth of this architectural typology. The research work starts with the study of the Skyscraper as an architectural and urban element. Analyzing it both in its intrinsic aspect as a city within the city, and in relation to the urban fabric where verticality meets its horizontal dimension, and it is when the tower building meets the city that we begin to talk about the vertical city. One of the paradigms of the city's height development is Hong Kong, chosen because its aspiration to heaven is not due to a demonstration of power and conquest, but it represents the only solution for growth in a metropolis where horizontal expansion is not possible. This territorial limitation has made the Asian capital an open-air laboratory on verticality, where the concept of the skyscraper has evolved from a simple tower to a complex urban element up to the birth of megastructures. Through research in the field, the merits and defects of this typological evolution have been outlined, finally identifying the relationship between person, skyscraper and vertical city, wherein an extreme capitalization of available space has not been preserved public space, which is instead created spontaneously by the inhabitants. The final result of the research is a metaproject resulting from the analysis carried out, where we see an opening of the skyscraper towards the city, going to accelerate the process already underway of verticalization by incorporating public space in its vertical growth.

RISE UP

上升

•1 Menhir of Champ-Dolent, Dol-de-Bretagne, France

HIGHNESS

高度

“Man must rise above the Earth-to the top of the atmosphere and beyond-for only thus will he fully understand the world in which he lives” [1]

With these words, Socrates expresses how deep in the human soul the desire for knowledge is nestled, so much that it pushes us to detach ourselves from the earthly surface, from the known to the unknown, which according to the Greek philosopher, the elevation towards the atmosphere should help us to fully understand the world we live in.

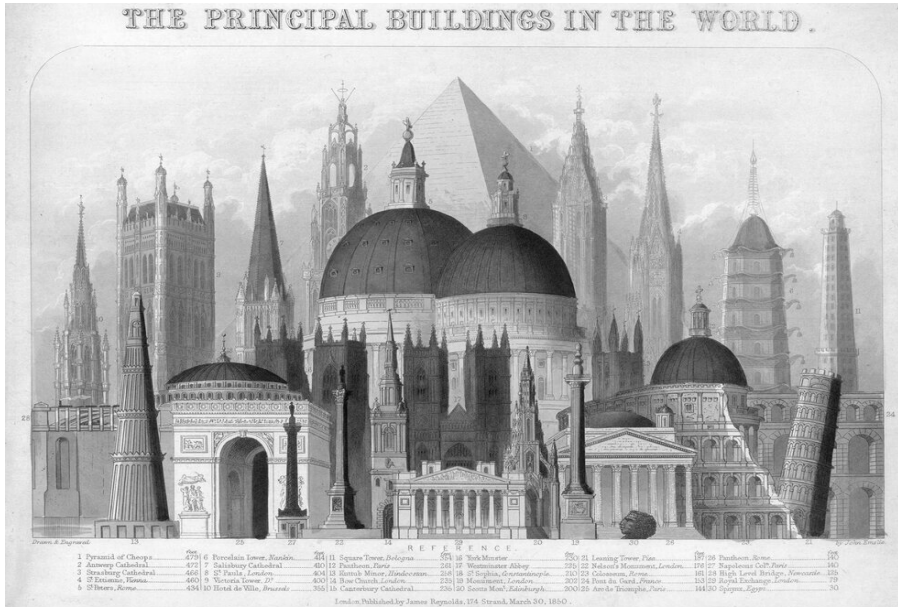
The detachment from the earth’s surface is a primordial act, a conquest, achieved only by finding a balance with the force of gravity by standing up, putting us in perfect alignment with the *Axis Mundi*: also called axis of the universe, present in many religions and mythologies represents the line that connects,

the underworld, the earth is the sky.

It is our isolation on this surface that feeds our obsession with verticality, the discovery of the unknown of what lies beneath us is what lies above us we see but cannot reach, and it's precisely the presence of this duality between sky and subsoil which has appeared, since the times of the times, in worldwide religions and beliefs

To reach a physical verticality, man has used two different methodologies throughout history: raising the level of the ground through structures or trying to reproduce the human body by raising elements vertically.

The *menhir* can be considered the primitive gesture of satisfying the ancestral need for verticality, monoliths are great stones placed vertically, it is easy to find them in countless archaeological sites scattered around the world, certainly the result of the great commitment of forces on the part of man of the time but at the same time important because it represented his presence in a territory, becoming an integral part of it, done to worship some God.



•2 The Principal Buildings in the World, James Reynolds & John Emslie, 1850

The most widespread evolution of the menhir is the stele, which had mainly a commemorative purpose or the transmission of information such as the Hammurabi codex engraved on a stele in the 18th century BC. Over time, there is an evolution of this vertical expression: we see the appearance of obelisks in ancient Egypt, like the minarets in Mesopotamia and with many different shades all over the world always conquering the sky.

This does not want to be a historical excursus on everything vertical has been done in history, but rather has the purpose to try to understand the importance of it in our lives and how the tall building has always held important functions over the centuries, whether religious, economic, or military.

It is curious to see how the human being has always tried to compare the tallest buildings: having the tower, the spire, or the tallest obelisk in his city became source of pride, in a somehow encyclopedic way and very often at the level of marketing, especially since 1800, where many illustrations were comparing buildings height.

From these illustrations you can see how the building, is extrapolated from its context,it is

not important in this case, you do not have much data, all buildings are compared only according to their height, creating an artificial mountain.

A common factor of this type of illustrations is the presence of the pyramids: often placed in the background as if they were a natural mountain relief, as if all the buildings had to be compared to the pyramids obviously for their size. Symbolism is also given by for the many expeditions to Egypt at that time.

The pyramids have been replaced or flanked in future comparative illustrations of the 20th century by the Eiffel Tower and the Empire State Building, new technologies brought an explosion in height, and with it, the symbols of the old world would occupy a smaller scene within these drawings, also demonstrating the superiority of contemporary man over all that was done before.

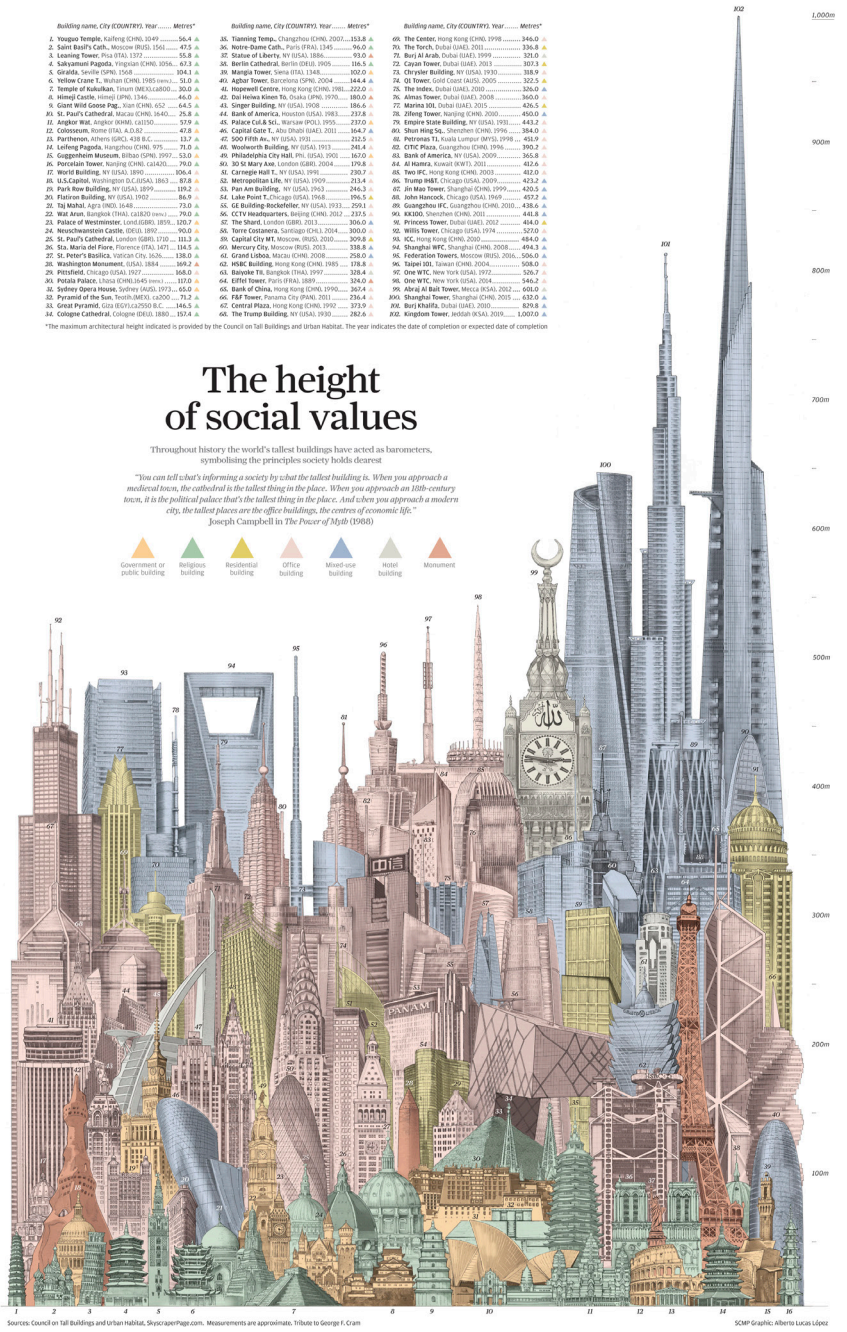
Returning to the present day, an illustration made recently by Alberto Lucas López, in collaboration with the Council on Tall Buildings and Urban Habitat, it's showing the classic representation of tableaux from past centuries and adds contemporary buildings.

The most interesting thing about

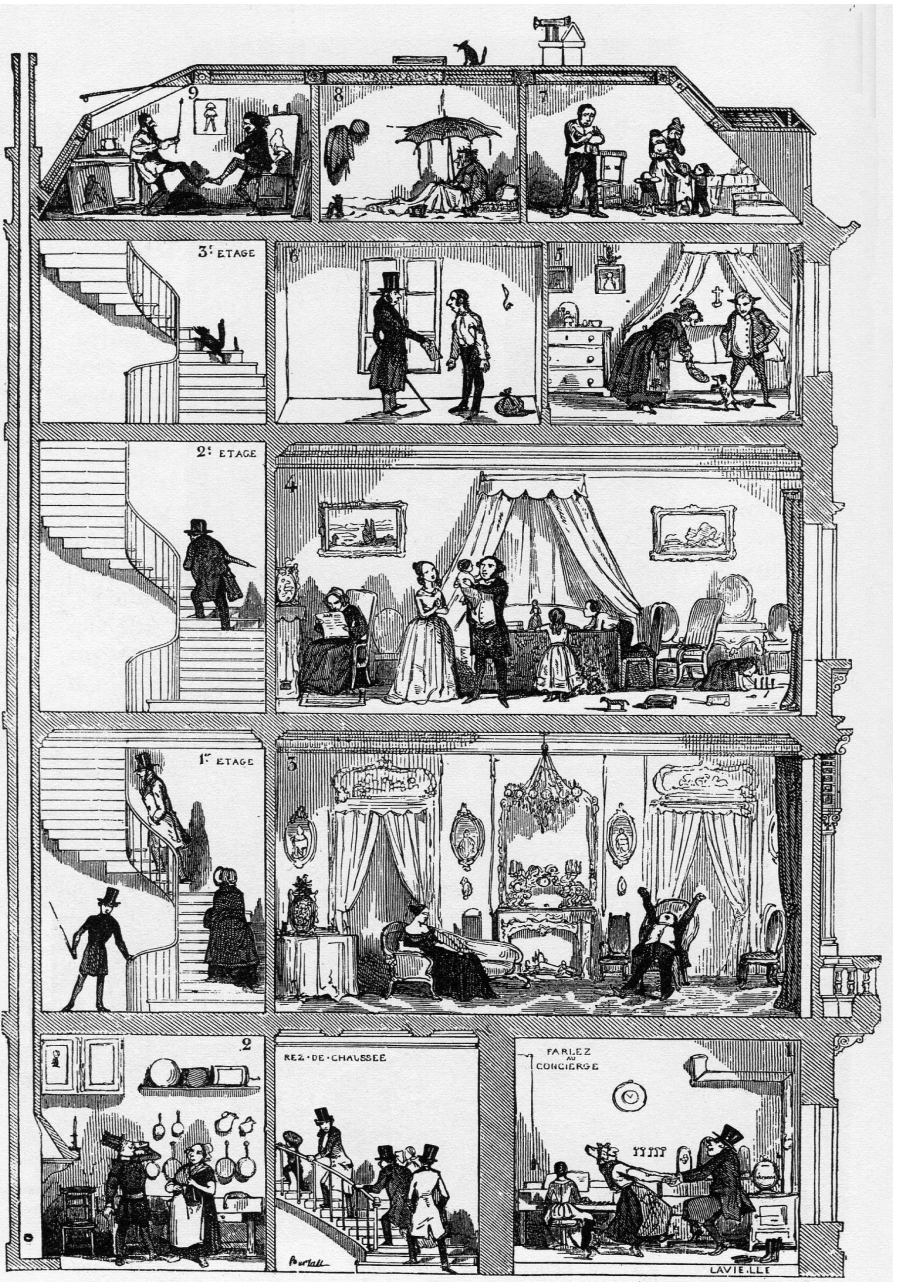
this image is that for the first time we also find a subdivision based on the use of these buildings.

It is read through the words of Joseph Campbell in the power of myth: “you can tell what’s informing a society by what the tallest building is. When you approach a medieval town, the cathedral is the tallest thing in the place. When you approach an 18th-century town is a political palace that’s the tallest thing in the place. And when you approach a modern city, the tallest places are the office buildings, the center of the economic life” [2].

Each historical era corresponds to different importance, use and symbolism of height, from religious buildings to those with a multitude of different functions to which we are accustomed today. The height becomes a mirror of the historical period in which it was built, what is the meaning of the tall building today?



•3 The height of social values, Alberto Lucas López and the CTBUH,2016



3. Cross section of a Parisian house about 1850 showing the economic status of tenants varying by floors. (Edmund Texier, *Tableau de Paris*, Paris, 1852, I, 65.)

•1 Les cinq étages du monde parisien, Tableau de Paris, Edmond Texie, 1852

GROWTH

生長

This illustration is dated back to the years characterized by the beginning of the Haussmannian disembowelments, by the end of the second French republic and it is during this period that Edmond Texier published two volumes called *Tableau de Paris* (1852-53).

In these two volumes all the features of the French capital are listed and analysed, like a promenades inside the city, showing through 1500 illustrations private and public spaces, exterior, and interior. In particular, the *Cinq étages du monde Parisien* table prevails for our reasoning.

We are in front of a cross section of a five-storey Parisian building, where the focal point is not the building envelope but the representation of the users: on the ground floor we find the concierge dancing to music played by her daughter on the piano and a kitchen where the

cook offers food to her relatives.

The first floor is the main one, the most valuable, where is represented an elegant and high-class environment. On the second floor we find a more bourgeois family with their children, on the third floor instead, a young banker and an old pensioner who lives with his caregiver and a dog. On the fourth and last floor (attic) we find the poorest class, represented by an artist, a philosopher and the family of an unemployed gentleman.

This illustration denotes a vertical geography in which on the ground floor we find the spaces of the residents who work in the building at the same time, detached from the ground level but not too much above we can see the main floor, the more valuable and from there, the higher is the level, the more the value of housing and social status decreases. On the other hand, the effective simplification of this cartoon cannot escape the desire to emphasize the stratification and social variety on which the Haussmannian interventions aim to intervene through a process of homogenization.

Almost totally opposed to our vision of a condominium where the highest floors are the floors that have the most value, this type of social distribution is given

by the lack of the elevator, which therefore almost automatically put the classes more affluent to a first floor to make it less difficult to climb the stairs but continue to have a detachment from the street level, while the poorer classes to the most difficult point to reach.

Haussmann's floor, is made up of a series of urban and building transformations that took place between 1852-1870, a plan to renew the image of the French capital, making it pass through scenarios described in Victor Hugo's *the Miserables* describing the contemporary image of Paris.

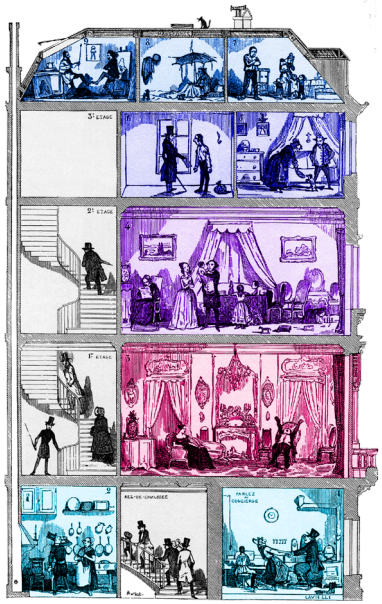
It is important because it was the last great urban building transformation before the advent of the elevators, which in the same years began to make their appearances in New York buildings. The Parisian buildings of that time did not own this new element of architecture that was beginning to change the world of architecture.

THE ELEVATOR

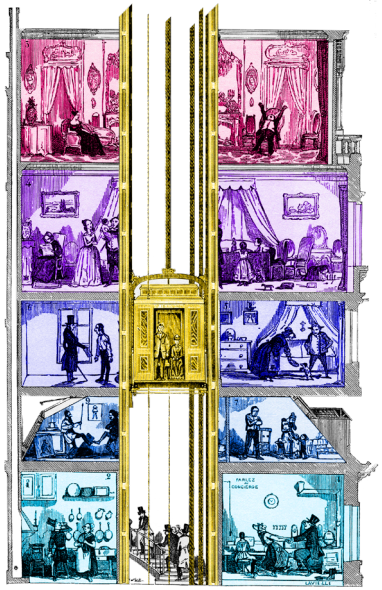
電梯

The technology that allows us to climb taller and taller buildings at the push of a button, small metal capsules that accompany us together with perfect strangers of short embarrassing journeys to heights that are difficult to reach on foot, the Elevator. We commonly use this object every day, are the result of an evolution born thousands of years ago.

The first rudimentary systems for transporting people were simple ropes used in mines, and it was precisely by going down in search of metals that men began to develop vertical transport technologies. One of the oldest mines discovered is the Laurion mine in Athens, abandoned in the first century BC, discovered in the 19th century and described by Édouard Ardaillon as a huge building, hidden under the earth.



• social classification of Les cinq etage du monde parisien



• social classification of Les cinq etage du monde parisien, with an elevator.

Also in ancient Greece, the first hints of platforms for the vertical transport of people could be seen inside the theatres, the *deus ex machina*: a god introduced by means of a crane in ancient Greek and Roman drama to decide the final outcome.(Merriam Webster)

This technology for the transport of people and goods, however, however, they did not have a great influence on the design of buildings, despite the numerous innovations made over the centuries.

The history of the elevator was greatly accelerated in the 19th century and five were the inventions that forever changed its technology and consequently the world of architecture and the city: the wire rope 1835 (Wilhem Albert), the electric motor 1881 (Werner Von Siemens), the safety brake 1853 (Elisha Otis), the car and the button 1889 (Charles E Ongley).

As we see in the diagram (figure XXX), *Les cinq étages du monde Parisien* described above, has a hierarchical structure strongly influenced by the vertical distribution, the most valuable apartments are first floor and main floor, and then by climbing upwards, the value of the house decreases.
All the opposite of what would happen with the insertion of a lift inside this structure, as can be seen in the diagram the floors would be completely inverted, where the most valuable floor is on the top floor and descending to street level also decreases the value, the size of the house and the social class of the tenants.

THE CORE

核心

The service core is the vital element of a tall building, it is like a backbone that gives structural stability and at the same time a place where vertical transport systems such as elevators and emergency stairs, utilities distribution systems and accessory rooms for maintenance or bathrooms are placed.

It is interesting how the idea of the core rather than the core itself came first, the invention of this architectural element can be attributed to Peter Cooper (1791-1883), an American industrialist and philanthropist.

Cooper thought of placing an elevator in his project for a school he was financing (the Cooper Union in New York), and he left a circular space which would later host the vertical transport device.

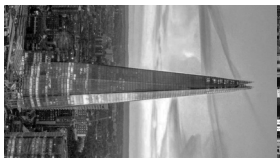
“at that time there were no passenger elevators, Mr. Cooper insisted on putting in the elevator shaft, saying that if there were no passenger elevators when the building was ready, he would build one”[3] , so his nephew, Edward Ringwood Hewitt, tells the American entrepreneur’s vision.

The construction site lasted eight years and when the school was finished, as Cooper predicted, the elevator was also invented, so this was the first building having a core with the new passenger elevator inside.

The core with all its components became the focal point for the development of the skyscraper, “since many masonry tall buildings rose before the acceptance of metal skeleton structures (one example is the Monadnock building in chicago). The role of the elevator was so important that the firsts descriprions of such new typology refer to the mas elevator- building or elevator-architecture”[4] .

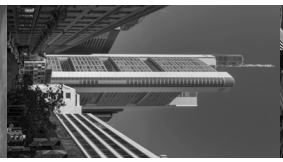
In the first tall buildings of the late 19th century it was common for the cores to be positioned in the centre of the structure.

.13
THE SHARD
RPBW
London
2012
309 m

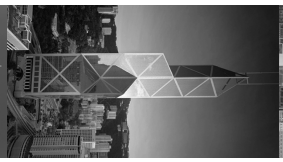


.10
TAIPEI 101
C. Li
Taipei
2004
508 m

.07
COMMERZBANK TOWER
Norman Foster
Frankfurt
1997
300 m



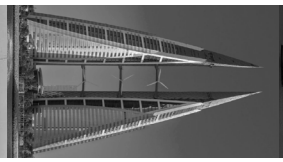
.04
BANK OF CHINA TOWER
I. M. Pei & Partners
Hong Kong
1985
367 m



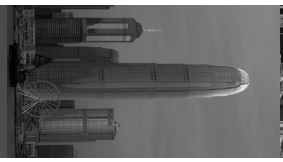
.01
SEARS TOWER
Skidmore, Owings and Merrill
Chicago
1973
527 m

.14
122 LEADENHALL STREET
Rogers Stirk Harbour + Partners
London
2013
225 m

.11
BWTC
Atkins Company
Manama
2007
240 m

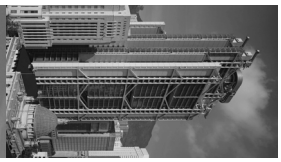


.08
IFC
César Pelli
Hong Kong
1998
415 m

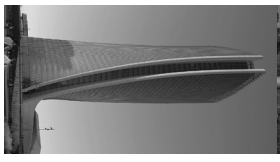


.05
CENTRAL PLAZA
Dennis & Ng Chun Lau
Hong Kong
1992
374 m

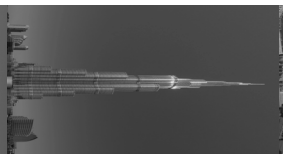
.02
HSBC TOWER
Foster and Partners
Hong Kong
1983
178.8 m



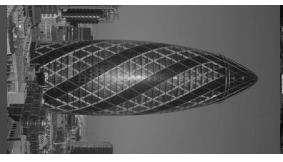
.15
GENERALI TOWER
Zaha Hadid Architects
Milano
2017
192 m



.12
BURJ KHALIFA
Skidmore, Owings and Merrill
Dubai
2009
830 m

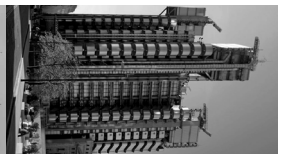


.09
30 ST MARY AXE
Foster and Partners
London
2003
180 m



.06
PETRONAS TOWERS
César Pelli[
Kuala Lumpur
1996
451.9 m

.03
LLOYD'S BUILDING
Richard Rogers & partners
London
1986
95 m



• CORES TAXONOMY • SKYSCRAPERS INFORMATION

• CORES TAXONOMY • ANALYSIS

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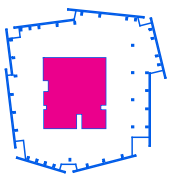

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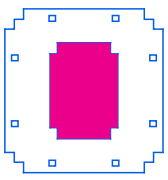

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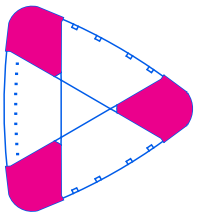

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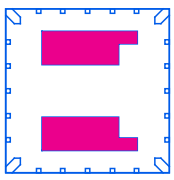

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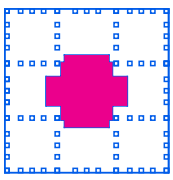

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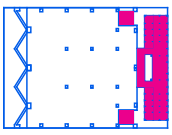

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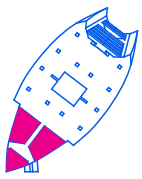

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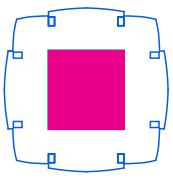

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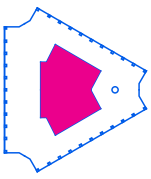

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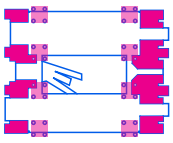

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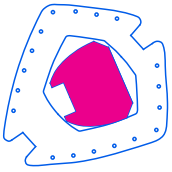

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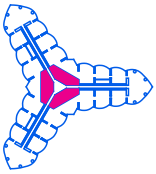

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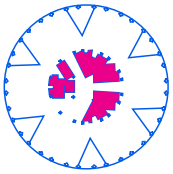

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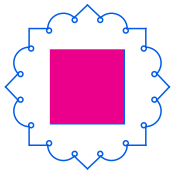

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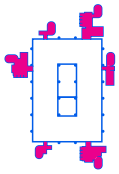
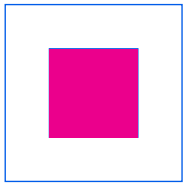


This location of the backbone of a tall building is due to the poor technology of electrical distribution and air ventilation, which also led to reduce building spans: about 6-8 meters, in order allow natural ventilation and use as much natural light as possible (oldfield et al. 2009).

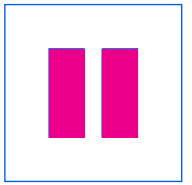
It was only thanks to the technological development of air conditioning systems and increasingly high-performance electrical networks that the core of high-rise buildings became detached from the centre of plan development.

One of the first buildings in which there is a different positioning of the core that is not at the centre of the plan development was The island steel Building (Chicago,1958, SOM): in this case the service device is completely separated from the main body, constituting a 25-storey tower, allowing to have an *open plan* free from the large bulk of the core (ablos & Herreros 2003).

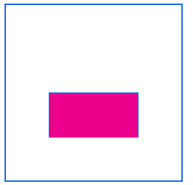
The core thus becomes the focal point in the design of tall buildings, in this perspective it was made an analysis on the arrangement of the cores inside the skyscrapers, in fact some of the most representative buildings were analysed and the position of the core was analyzed according to the plan drawing.



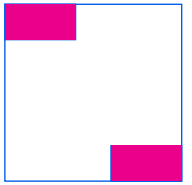
CENTRAL CORE



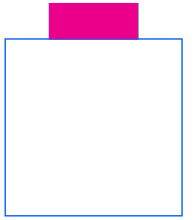
SPLIT CORE



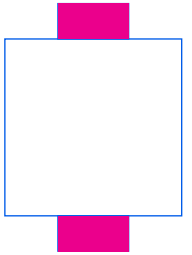
DEVOLVED CORE



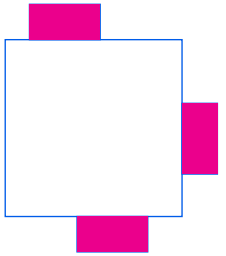
BOUNDARY



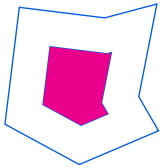
EXTERNAL CORE



SPLIT EXTERNAL CORE



EXTERNAL CORE



IRREGULAR CORE

The backbone of the tall buildings is one of the primary elements in the design, in addition to all the reasons described above, also because it occupies about 20-30 % of the useful surface. Three macrocategories have been identified from the taxonomy: central, decentralized or external.

Central: it is one of the first to be used and also one of the most widespread, thanks to its position it simplifies the division of space but at the same time limits the distribution and size of the span. In the vast majority of cases, the shape of the core corresponds to an offset of the perimeter of the building, to facilitate the division of spaces and circulation.

Devolved core: allows more freedom in the arrangement of spaces and the creation of large open spaces. However, the problems of accessibility to all areas of the floor must be taken into account.

External core: which leaves the entire floor area free, making it totally flexible, but you must always take into account accessibility and in this case the shadow created by the proximity of this separate volume.

The evolution of the core is increasingly moving towards sustainability and the improvement of climatic performance also according to its position (shading), or try to encourage the natural movement of the air through the creation of voids.
The world of architecture is driven to think outside the box, trying to find new types of cores and consequently new solutions for skyscrapers.

•1 William Le Baron Jenney, Home Insurance Building, 1885

TYPOLOGY

類型學

The architectural typology of the skyscraper is one of the most recent but also one of the most discussed since the beginning of the last century, and its appearance radically changed the world of architecture. From the end of the 19th century, the promise of the "reproduction of the world"[5] attracted architects, engineers, entrepreneurs and planners, all of whom were bewitched by this new prophecy described by Sullivan in 1896 as a new mission for architects.

"The architects of this land and generation are now brought face to face with something new under the sun - namely that evolution and integration of social conditions, that special grouping of them. That results in a demand for erection of tall office buildings... Problem: how shall we impart to this sterile pile, this crude, harsh, brutal, agglomeration, this stark, staring exclamation of eternal strife, the graciusness of those

higher forms of sensibility and culture that rest on the lower and fiercer passions? How shall we proclaim from the dizzy height of this strange. Weird modern housetop the peaceful evangel of sentiment, of beuty the cult of a higher life?”[6]

The Skyscraper was one of the first great architectural innovations born in America, the result of new technologies, economic growth and cities still to be planned. An element that slightly detaches the new continent from the old Europe: “in America we are free of artistic traditions. Our freedom produces license is true. We do shocking things: we produce irreparably ugly architectural works; we do raw experiments that are disastrous. Yet somewhere in this mass of these ungoverned energies lies the principle of life. A new spirit of beauty is being developed and perfected, and even now its first results are beginning to delight us. This is not a remake of the old; it is the new. It is born of the past, but it is not bound by it; it studies traditions, but without becoming a slave to them.”[7]

In the history of the skyscraper, the competition for the new Chicago Tribune headquarters marks a turning point in the debate. This event is defined by Tafuri as a demonstration of the

• Petronas Towers, César Pelli,1996

•2 CCTV Headquarters, OMA, 2012

crisis of the American High-rise building. This competition is the first moment of confrontation on the theme of the skyscraper between America and Europe.

The main criticism that is made of the new typology by European architects is the lack of relationship with the disputed, where the tower becomes “the island” described by Koolhaas in delirious New York.

It was then Mies van der Rohe and Philip Jonson who changed the route of the Skyscraper with their Seagram Building, its sober and austere form, the curtain wall, the building back from the edge of the street creating public space and with its shape, leading to the modification of zoning law, which in exchange for the sale of part of the tin for public use made it possible to create more compact Shapes. From this moment the era of high-rise building approved by the compact volume opens.

During the 1980s, however, the monolithic glass box became a cage that no longer reflected technological progress and new urban scenarios. Looking for a formal spectacularity and the search for novelty, John Burgee also highlights the importance of having skyscrapers with their own specific recognizability, so as to have recognizable and different skylines.

An example of this new vision of the tall building is HSBC by Norman Foster in Hong Kong, which with its shape and all the technologies used, marks a turning point for the skyscraper. In the following decade, however, the high-rise building began to be linked to the cultural context in which it is located, elements that laid the foundations for a new experimentation based on the development of a local identity for the building. The first hints of an increasingly strong relationship between horizontal and vertical are also beginning to be seen.

It will be even more evident with the competition for the reconstruction of the World Trade Center area in New York, after the attack on the Twin Towers, a tragedy characterized by explicit requests for revisiting.

Even if the competition was won by a Libeskind project considered not very innovative, interesting were the projects presented by Foster, Meier and Team THINK team (Shigeru Ban + Dean Maltz, Frederic Schwartz, Ken Smith, Rafael Vinoly). In the proposals mentioned we can see a real innovation of the tall building and a greater complexity.

Shortly before the publication of the results of the competition of the new ground zero, Rem Koolhaas In his book content (2003) , he wanted to *kill the skyscraper*, it was almost ironic but at the same time a great result of his research, and in 2013 he won the award for best skyscraper from (CTBUH) with the project for the new headquarters of the CCTV.

A project that revolutionized the concept of tall buildings in a developing country like China, a paradigm of possible new research for this type of building that Koolhaas himself commented on at the award ceremony:
“was an expression of disappointment at the way the skyscraper typology was used and applied. I didn’t think there was a lot of creative life left in skyscrapers. Therefore, I tried to launch a campaign against the skyscraper in its more uninspired form. [....] The fact that I am standing on this stage now, in this position, meant that my declaration of war went completely unnoted, and that my campaign was completely unsuccessful, [...] Being here, it is quite moving - to be part of a community that is trying to make skyscrapers more interesting.”[8]

CLASSIFICATION

分類

Skyscraper, is a structure whose vertical dimension prevails over the horizontal one and with its elevation in height aims to touch the sky.

It is difficult to define the birth of the tower building, because as we have seen before it is the result of a technological and social evolution that started with the first ancestral constructions of man.

The meaning of the term as we know it today is also poorly defined, in every historical period the tallest building could be called a skyscraper. When is a tall building considered a skyscraper and when not?

Around 1880, when tower buildings began to make their first appearances on the American scene, a skyscraper meant a building that had between 10 and 20 floors, but with the rapid advancement of technology already at the beginning of the twentieth century, the term indicated buildings that had more than 40 floors.

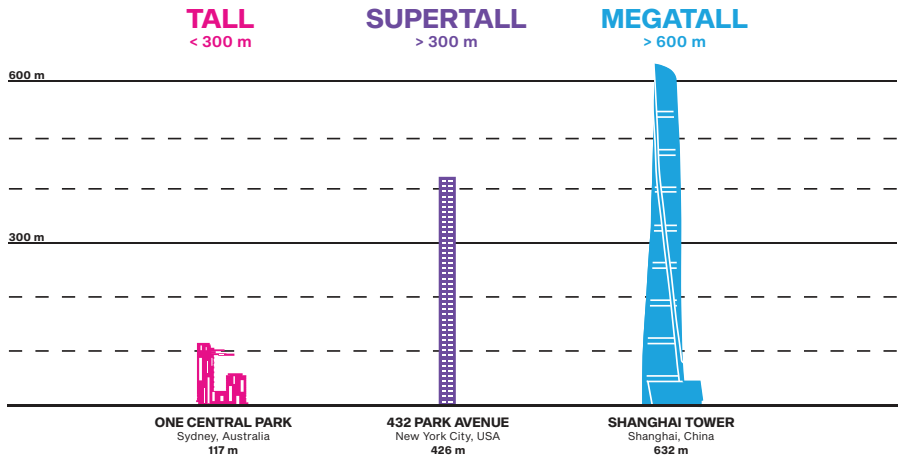
There are no precise definitions on the parameters that make up a skyscraper, we generally rely on the guidelines used by the Council on Tall Buildings and Urban Habitat: a non-profit association established in 1969 and based in Chicago, which studies and collects data, touching all aspects of tall buildings and urban space.

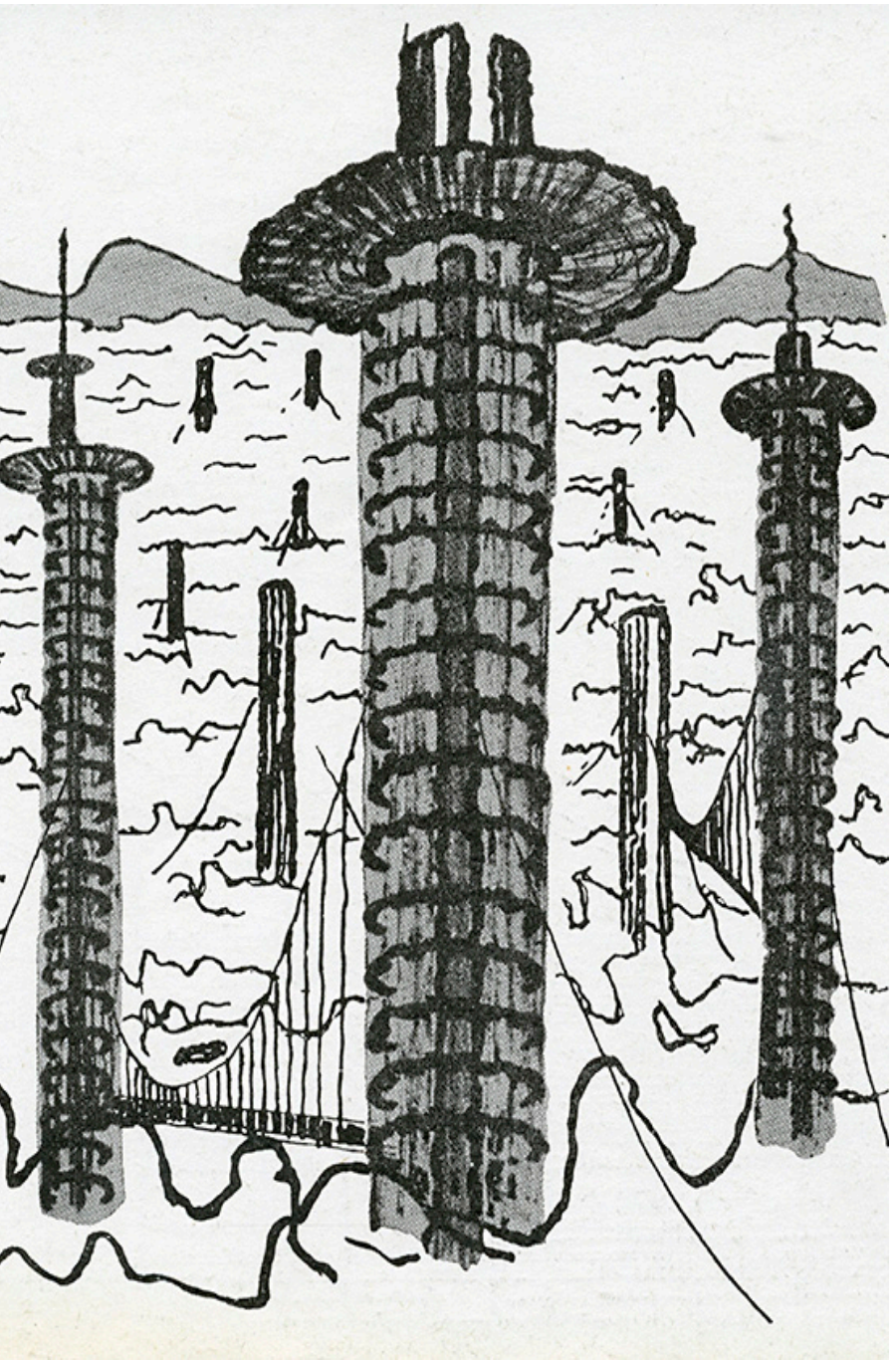
The CTBUH has also drawn up its guidelines for defining a High rise Building, and these have been used almost all over the world: height concerning the context in which the building is located, the dimensional proportions, and the technologies used.

To define the various classifications, the skyscraper

is considered a building that exceeds 150 meters of lateness, but given the continuous evolution of construction technologies and the ever-faster reaching of ever greater heights, it has been outlined a division between the different types of skyscrapers according to their size: the *Tall* are the buildings smaller than 300 meters, the *Supertall* those greater than 300 meters and finally we have the *Mega Tall* that are those greater than 600 meters, but nowadays only the Burj Khalifa (823m), the Shanghai Tower (632m) and the Makkah Royal Clock Tower (601m) reach these heights.

•4 CTUBH , HEIGHT CRITERIA





•1 Hiroshi Sasaki, Iroki Onobayashi, Hiroyasu Yamada. Casabella 273, 1963

HORIZONTAL AND VERTICAL

水平和垂直

On the basis of our understanding of space we can find: the horizontal dimension parallel to the plane of the horizon as the surface of the sea or the land where we exist, and the vertical dimension that is perpendicular to the previous one joining the bread on which we live to the sky.

On an architectural level, the relationship between these two dimensions is due not only to the shape of the single building and the perception of the latter in a broader view, but also to the link with the urban context in which it is located.

The proportion between vertical and horizontal on a small and large scale is an ancient debate, embracing different fields, from architecture to urban planning, economics and politics. In ancient times it was the walls that delimited horizontal expansion, today there are no limits to expansion.

According to a report by the United Nations today 55.3% of the human population lives in urban centers that by 2030 will grow up to 60% against a population growth from the current 7.4 billion up to about 8.5 always in 2030. This data shows how the debate on vertical/horizontal is more and more topical, where there is a continuous densification of urban areas, trying to avoid the phenomenon of “sprawl”, in this context the type of skyscraper assumes a decisive role for the growth of these cities.

The urban narrative has changed with the passing of time: from the conquest of territory and power, to the search for less land consumption and greater energy efficiency, linked to an aspiration to cultural and social integration. (Emilio Faroldi 2019)

In this view, talking about horizontal or vertical development as two distinct aspects is reductive, as we will analyse later, the relationship between horizontal and vertical within Asian vertical cities such as Hong Kong or Singapore is much more linked. Densely inhabited and relatively small urban areas, where the links between the two dimensions, between skyscrapers and urban space, have been experienced, thinning more and more the boundary between these two

•2 A screenshot from the film Metropolis, 1927

• PINNACLE DUXTON,RSP ARCHITECTS PLANNER ENGINEERS, 2009

visions.
The discussion on the horizontal or vertical development is highly topical not only at the macro-scale but also at architectural scale, in particular it focuses on how the evolution of the skyscraper integrating a horizontal development of connections brings the typology from a simple tower to a vertical fabric strengthening the connection of the building to the urban system.

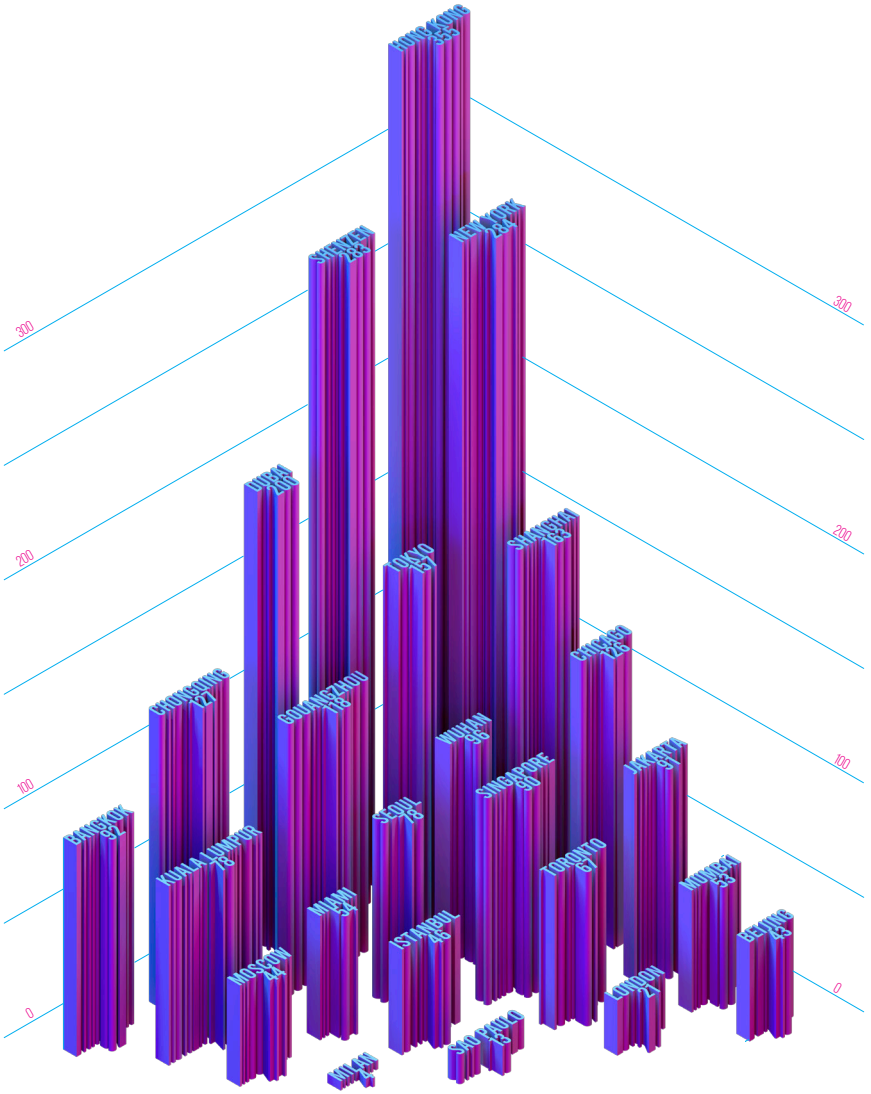
Visions on this type of combined evolution of the two dimensions were already born at the beginning of the last century, with the projects of Antonio Sant'Elia, or in the sixties with the visions of Archizoom, all thoughts that were ahead of time compared to the building technologies that only now manage to build more complex vertical architectures.

All the visions of these complex cities, in which architectures become mega-structures, city after city, from those of Le Corbusier to those of Japanese metabolists like Arata Isozaki, are gradually becoming reality. (Giusi Ciotoli 2017)

The study of the evolution of the skyscraper as a vertical fabric is a complex phenomenon still in progress. Fruit of the evolution that has led from the construction of the first skyscraper to the agglomeration of skyscrapers, until the development of the vertical fabric. Abandoning the construction of many towers of Babel to the chase of the sky, but embracing the more human dimension of horizontality.

• REFLECTIONS AT KEPPEL BAY, STUDIO LIBESKIND, 2011


HONG KONG
香港



• BAR CHART OF THE CITIES RANKING BY NUMBER OF 150M+ COMPLETED BUILDINGS. SOURCE: WWW.SKYSCRAPERCENTER.COM

WHY HK

為什麼是香港

Choosing Hong Kong as a case study for this research derives from multiple reasons: its interesting socio-political nature, its architecture, and the way it experiences verticality.

It is one of the best examples of a city that coexists with great density, in tune with the green of the steep mountains, combined with one of the most efficient public transport networks in the world. Hong Kong's role as a paradigm of the vertical dense city is not only due to its top ranking as the city with the most skyscrapers (150+ m) in the world (according to CTBUH), but in particular, to the resilience the city has had, changing its appearance and habits with the maximum efficiency.

Metropolises like Singapore, Shenzhen or Kuala Lumpur are evolving, following, in some cases exceeding, the urban efficiency of Asia's World City.

With these assumptions the choice of Hong Kong was almost inevitable, since its verticality (at least until a decade ago) was not the result of the pursuit of a status of a city with more skyscrapers, as a symbol of economic power, but because growing towards the sky was and is the only usable space the only option to host dramatically growing population and business. Not chasing the monumentality of growth in height but purposing a three dimensiona lurban planning in, and fertile ground to study and hypothesize the future of the skyscraper more and more as an urban element.

• CITIES RANKED BY NUMBER OF 150M+ COMPLETED BUILDINGS.
SOURCE: WWW.SKYSCRAPERCENTER.COM

#01 HONG KONG-355 #02 NEW YORK CITY-284 #03 SHENZHEN-283 #04 DUBAI-200 #05 SHANGHAI-163 #06 TOKYO -157 #07 CHONGQING-27 #08 CHICAGO-126 #09 GUANGZHOU-118 #10 WUHAN-95 #11 BANGKOK-92 #12 JAKARTA -92 #13 SINGAPORE-90 #14 SHENYANG-85 #15 CHENGDU-81 #16 KUALA LUMPUR-78 #16 SEOUL-78 #18 TORONTO-67 #19 BUSAN-62 #20 NANJING-58 #21 MIAMI-54 #21 TIANJIN-54 #23 MUMBAI-53 #23 NANNING-53 #25 PANAMA CITY-52 #26 MELBOURNE-47 #27 ISTANBUL-46 #28 MAKATI-44 #28 MOSCOW-44 #30 BEIJING-43 #30 OSAKA-43 #32 DALIAN-41 #33 HANGZHOU-39 #33 HOUSTON-39 #35 ABU DHABI-38 #36 DOHA-35 #36 SYDNEY-35 #38 CHANGSHA-34 #39 INCHEON-32 #39 MACAU-32 #41 NANCHANG-29 #41 XIAMEN-29 #43 SUZHOU-27 #43 LOS ANGELES -26 #45 SAN FRANCISCO-25 #45 JINAN-24 #46 ZHUHAI-24 #48 MEXICO CITY-23 #49 QINGDAO-22 #50 HEFEI-21 #50 LONDON-21 #50 NINGBO-21 #50 SEATTLE-21 #50 WUXI-21 #55 BOSTON-20 #55 DALLAS-20 #55 LIUZHOU-20 #58 CALGARY-18 #58 KUNMING-18 #58 RIYADH-18 #61 ATLANTA-17 #61 FUZHOU-17 #61 KUWAIT CITY-17 #61 TAIYUAN-17 #65 FRANKFURT AM MAIN-16 #65 HO CHI MINH CITY-16 #65 MANDALUYONG-16 #68 BRISBANE-15 #68 XI'AN-15 #70 GOYANG-14 #70 LAS VEGAS-14 #70 PYONGYANG-14 #70 TAIPEI-14 #74 COURBEVOIE-13 #74 MANAMA-13 #74 PHILADELPHIA-13 #74 SÃO PAULO-13 #74 TAICHUNG-13 #74 TEL AVIV-13 #80 BOGOTA-12 #80 KOLKATA-12 #80 PATTAYA-12 #80 SHARJAH-12 #84 BALNEARIO CAMBORIU-11 #84 BUENOS AIRES-11 #84 GUIYANG-11 #84 JERSEY CITY-11 #84 LANZHOU-11 #84 MONTREAL-11 #84 NAGOYA-11 #84 ZHENGZHOU-11 #92 DAEJEON-10 #92 DONGGUAN-10 #92 KAWASAKI-10 #92 PITTSBURGH-10 #92 SUNNY ISLES BEACH-10 #92 TAGUIG CITY-10 #98 COLOMBO-9 #98 GOLD COAST-9 #98 HANOI-9 #98 MINNEAPOLIS-9 #98 SHIJIAZHUANG-9 #103 DENVER-8 #103 DETROIT-8 #103 KAOHSIUNG-8 #103 PASIG-8 #103 URUMQI-8 #103 WARSAW-8 #103 YOKOHAMA-8 #110 ANKARA-7 #110 CHARLOTTE-7 #110 HUIZHOU-7 #110 MANILA-7 #110 MECCA-7 #110 SAN PEDRO GARZA GARCÍA-7 #110 SURABAYA-7 #117 BANCIAO CITY-6 #117 DAEGU-6 #117 FOSHAN-6 #117 IZMIR-6 #117 JEDDAH-6 #117 KOBE-6 #117 LAIBIN-6 #117 ZHANJIANG-6 #125 AUSTIN-5 #125 BURNABY-5 #125 CARTAGENA-5 #COLUMBUS-5 #125 HARBIN-5 #125 JOHOR BAHRU-5 #125 MADRID-5 #125 PENANG-5 #125 ROTTERDAM-5 #125 TANGERANG-5 #125 ULSAN-5 #125 WENZHOU-5 #125 ZHONGSHAN-5 #125 BAKU-4 #138 BALTIMORE-4 #138 CARACAS-4 #138 CHANGCHUN-4 #138 CHIBA-4 #138 CLEVELAND-4 #138 HAIKOU-4 #138 HWASEONG-4 #138 JOHANNESBURG-4 #138 MILAN-4 #138 NEW ORLEANS-4 #138 NEW TAIPEI CITY-4 #138 PERTH-4 #138 PORTLAND-4 #138 SANYA-4 #138 TAMPA-4 #138 TUSLA-4 #138 YANTAI-4 #156 ASTANA-3 #156 CHANGZHOU-3 #156 CINCINNATI-3 #156 DAR ES SALAAM-3 #156 FORT WORTH-3 #156 HARTFORD-3 #153 HIROSHIMA-3 #156 INDIANAPOLIS-3 #156 JIANGMEN-3 #156 LUOYANG-3 #156 MILWAUKEE-3 #156 MISSISSAUGA-3 #156 NANTONG-3 #156 OKLAHOMA CITY-3 #156 ORDOS-3 #156 PUTEAUX-3 #156 PUTRAJAYA-3 #156 RAMAT GAN-3 #156 RIO DE JANEIRO-3 #156 SAN DIEGO-3 #156 ST. LOUIS-3 #156 VANCOUVER-3 #156 VIENNA-3 #156 WUHU-3 #156 YEKATERINBURG-3 #156 ZHENJIANG-3 #183 AL FUJAYRAH-2 #183 ANYANG-2 #183 ATLANTIC CITY-2 #183 AUCKLAND-2 #183 BARCELONA-2 #183 BARRANQUILLA-2 #183 BATUMI-2 #183 BEIRUT-2 #183 BENIDORM-2 #183 BUCHEON-2 #183 CHANGWON-2 #183 CURITIBA-2 #183 DA NANG-2 #183 EDMONTON-2 #183 FORT LEE-2 #183 GOIANIA-2 #183 GUADALAJARA-2

AFRICA - ASIA - EUROPE - AMERICA - OCEANIA

• VICTORIA HARBOR
12.2019

The Asia world's city is the brand hrough which the cosmopolitan city in the heart of the East has been sponsored since 2001. In addition to its geographical location, which has led Hong Kong to be a center, commercial, financial, and cultural center of the whole Asia is its history.

In order to better understand what the city-state represents now, it is important to know its past, every factor was crucial for the creation of Hong Kong today, transforming it both physically and in character, making it possible for Fragrant Harbour (translation from Cantonese Heung gong) to find its role in the world.

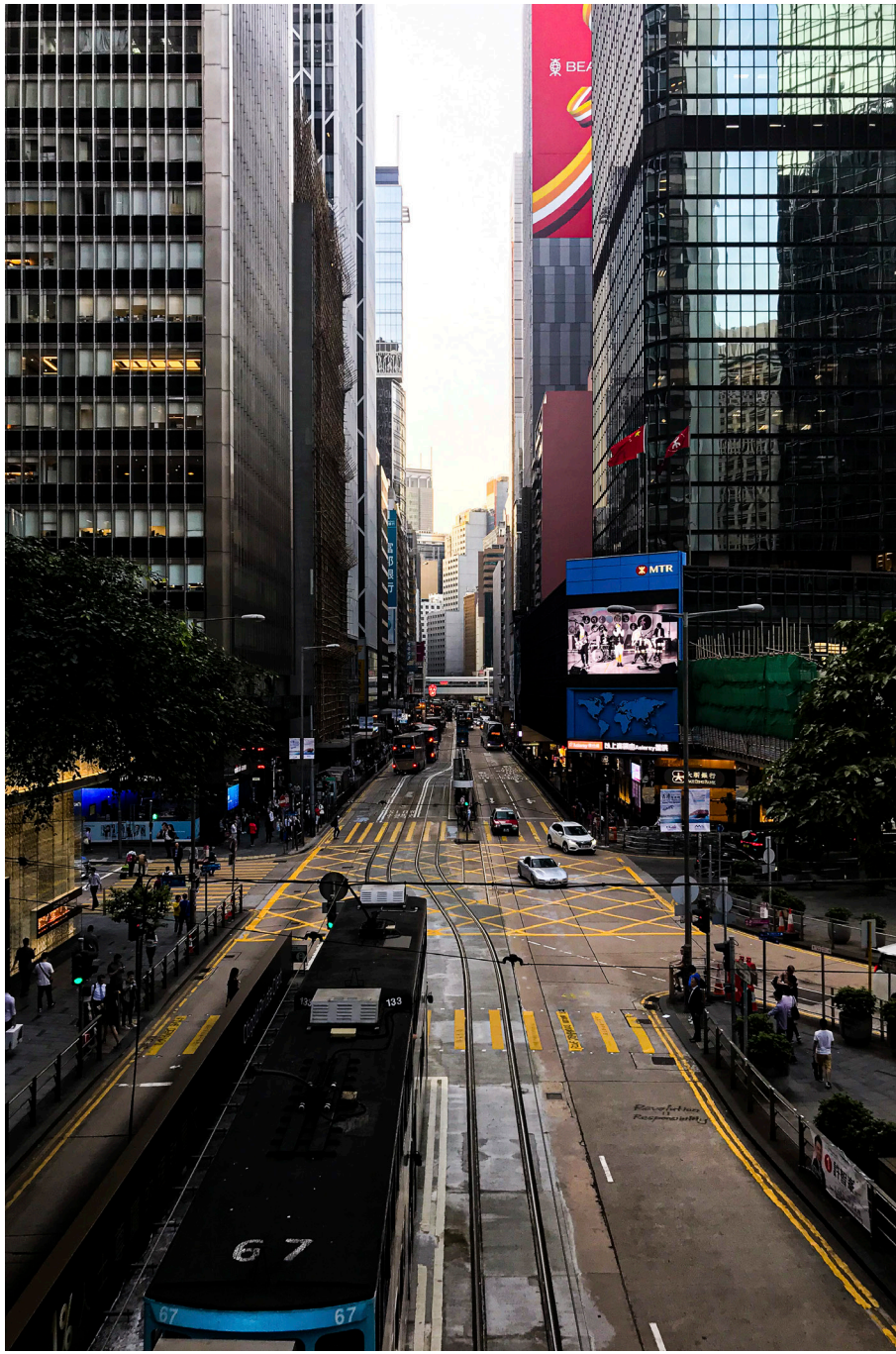
The fate of the Pearl of the East changed radically when, with the signing of the Nanjing Treaty in 1842, the island of Hong Kong came under British control after the first opium war. The island's borders expanded until 1898 with

the Convention for the Extension of the Territory of Hong Kong, the island of Lantau, and what is now known as the New Territories were ceded for 99 years.

From that time on, culture and education began to be introduced, creating a mix of cultures and making the city a free and prosperous port. There was an exodus from mainland China to the British colony that was reversed during the Japanese occupation which lasted from 1941 to 1945 and saw a reduction in population from 1.6 million to 600,000.

The British crown once again took over Hong Kong after the Japanese occupation, and until then it has seen an exponential population growth of about 1 million people every decade, partly due to the new exodus to the colony after the proclamation of the People's Republic of China in 1949.

The fate of the "lucky city" underwent a new drastic change, after about 156 years under British rule, in 1997 sovereignty passed to the People's Republic of China, with the promise, however, to ensure the region at least 50 Special Administrative Region, thus maintaining the rights and footprint of the old colony. The air of uncertainty about the future of Hong Kong, which had become



• CENTRAL
11.2019

the gate of China, attracted new investments, on a more social level pro-democracy protests began.

The history of the last 200 years made the city “protected by the dragon”, what it is today: a cosmopolitan city, a meeting point between East and West, where cultures from all over the world mix without losing their identity.

• WAN CHAI
11.2019

HOME KONG

家港

“You can leave Hong Kong, but it will never leave you”[9].

This is the recurrent phrase that I saw written on websites and looking for descriptions about Hong Kong. I thought it was one of the classic statements a bit branded that every big city has, but it wasn’t so, in this case, I think a city like “HK” a bit change your life and maybe that quote was right.
I still do not understand what motivated me to undertake this experience, before the departure the news coming from HK were not the most reassuring. Photos, videos, and news of protests and appeared on any platform, people around me tried to convince me to stay in Italy, driven perhaps by a good dose of unconsciousness I decided to leave Europe for the first time in my life. The impact with the city was devastating, it overwhelmed me as when as a child I tried to fight the waves of the sea and after the impact, I

was dragged on the on the beach, in the same way, the encounter with Hong Kong was equally beautiful, fun, exciting, adrenaline, melancholic, painful.

The first days I felt as if was not living those moments, I was exploring the jungle of skyscrapers, trying to understand how that organized chaos worked, people looked like flocks of birds that I was trying to enter following their path. One of the first days I came across a gentleman sleeping on the sidewalk (while his friends were trying to wake him up), he had a T-shirt with I love HK written on it and that scene was a representation of everything I felt in those moments.

With time, I began to recognize the faces on the street, I had landmarks, I recognized skyscrapers and hilltops that reminded me a bit of a tropical and steep version of the green frame of Turin my hometown. Crossing parts of the city without ever touching the ground, meeting on the thirtieth floor of a building and dodging demonstrations began to be normal and without realizing it in a short time I became part of that hypnotic flock of people who moved together without knowing each other. As the days went by, I felt more and more comfortable, and without even realizing it I went from calling that city Hong Kong to Home Kong.

• HONG KONG ISLAND
11.2019

• 10 HONG KONG DOLLARS

NEON CITY

霓虹城市

The basic 10 HKD (Hong Kong dollars), I was immediately attracted by this banknote: I discovered afterward that it is the youngest, , in circulation from the 1994, different from the others because it doesn't represent buildings or famous people but only geometric shapes.

It was not the drawings and patterns that attracted me about that banknote, it was those bright colors: blue, purple, fuchsia and a small yellow ribbon. I played with it and analyzed that piece of plastic from the airport to Fortress Hill, as if that banknote was premonitory of something I had yet to discover.

On my bus ride to the place, I was going to call home for the next few months, as soon as I entered Nathan road I was bathed in a sea of neon lights, which reflected on every surface of the road as if I was at the amusement park and so it was all the way to Fortress

hill. An hour or so after my arrival in the new house I immediately went out for a walk to Causeway bay and it was just as I bought a bottle of water at a kiosk that I understood why the colors of the $10 bill attracted me so much.

It is as if the colors of that bill represented the colors of Hong Kong night, neon sign lights reflecting off the surfaces and illuminating and coloring all the buildings around them.

Curiously, how can we find a symbolic correlation between these two things, the hues of the banknotes and those of the luminous signs (which are now part of the visual identity of the city), as if those neon colors, not only represent the shops that overlook and advertise, but are a mirror of the capitalist city where it is almost directly the economic power to be represented with these signs.

The neon lights are like that friend that keeps you awake and takes you around the city to explore the darkness of the night. It keeps you alive with its colors, completely changing the perception of the city, everything that is gray during the day, chaotic almost oppressive, in the evening becomes colorful, silent, freeing the most hidden thoughts and becoming the only presence in the darkness of the night.

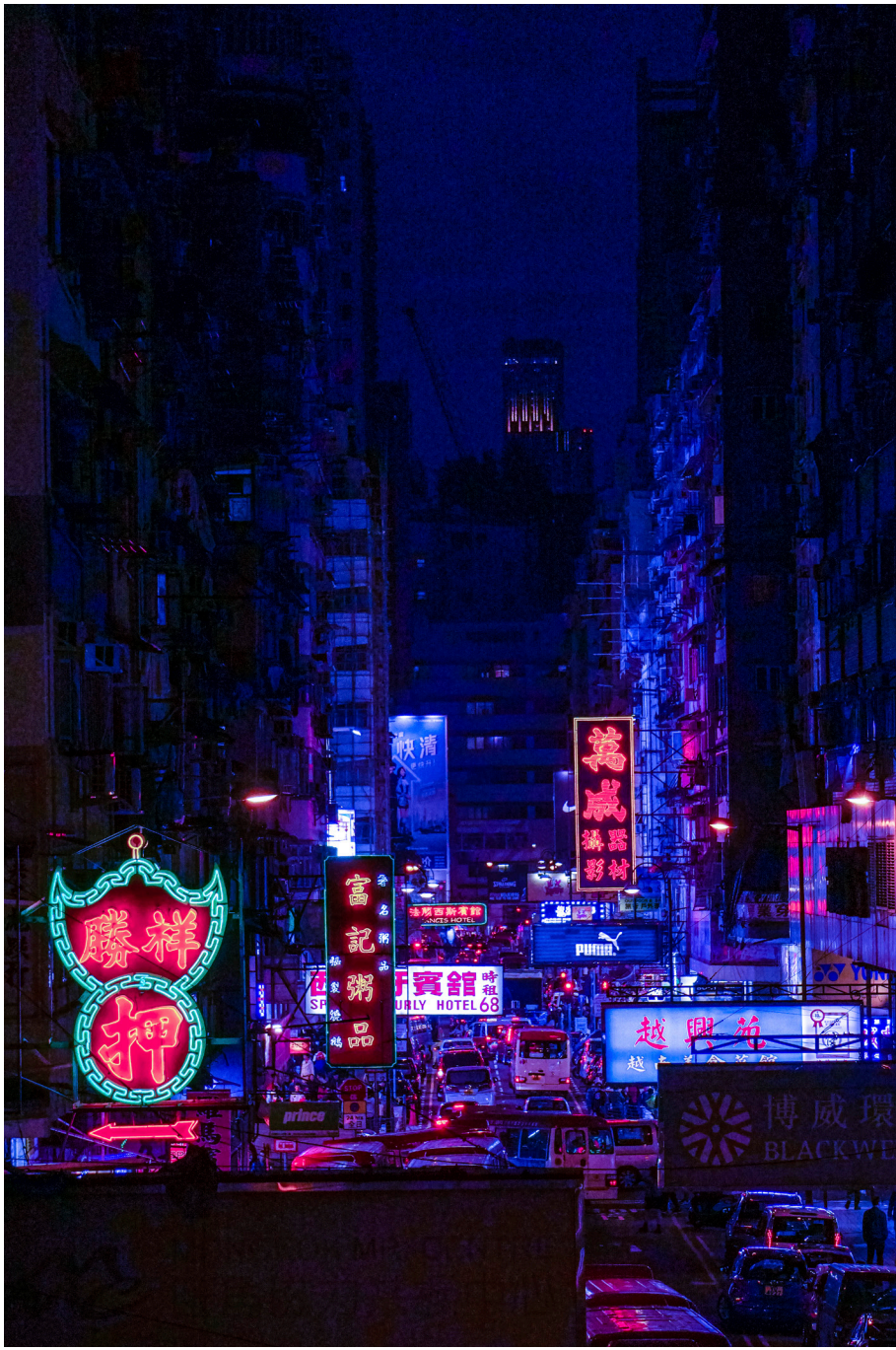
• HK
TINHAU
12.2019

Since their first appearances in 1920, and with their explosion between the 1950s and 1980s the neon signs had a rapid evolution, completely changing the perception of Hong Kong and becoming part of the architectural and urban design.

In the common imagination, this colored carpet became a characteristic of the now-former English colony in a few decades and it is reflected in all representations of the city from films to art and literature.

For example, Wong Kar-wai's cinematography (As Tears Go By, 1988; Chungking Express, 1994 and fallen Angels 1995) in which neon lights and their lights act as background but at the same time influence the colors of the scenes, showing how these colored lights are now part of the city's narrative (Lawrence Pun) 2014.

These are the lights that have accompanied me throughout my stay in Hong Kong, they have been guiding and supporting and for an almost melancholic reason that will also be the colors with which I will tell my Hong Kong.



• HK
MONG KOK
12.2019

• HK
MONG KOK
01.2020

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• HK
WAN CHAI
01.2020

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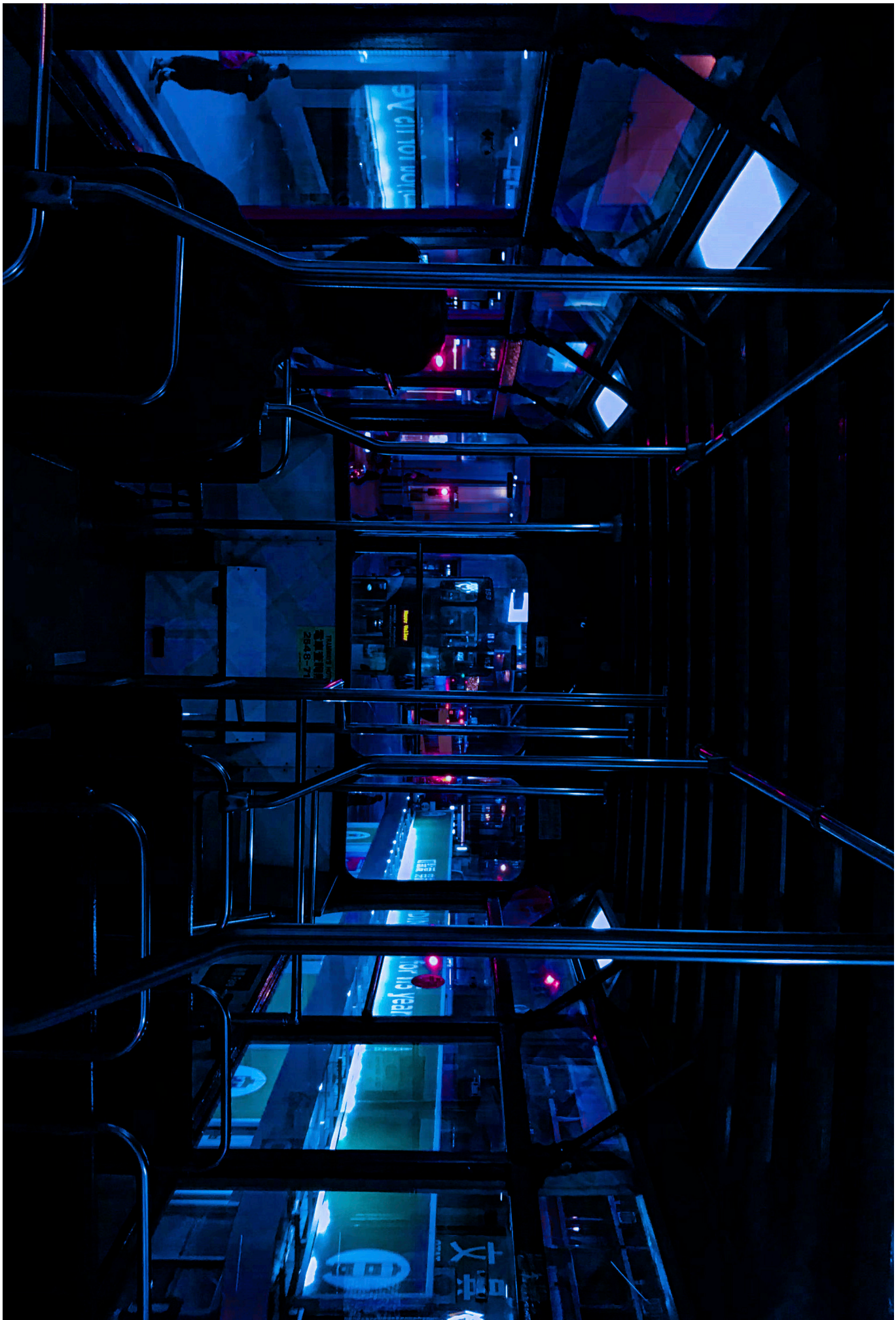
WAN CHAI
01.2020

083

• HK
CENTRAL
12.2019



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CAUSEWAY BAY
01.2020

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CENTRAL
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MONG KOK
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TSIM SHA TSUI
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WAN CHAI
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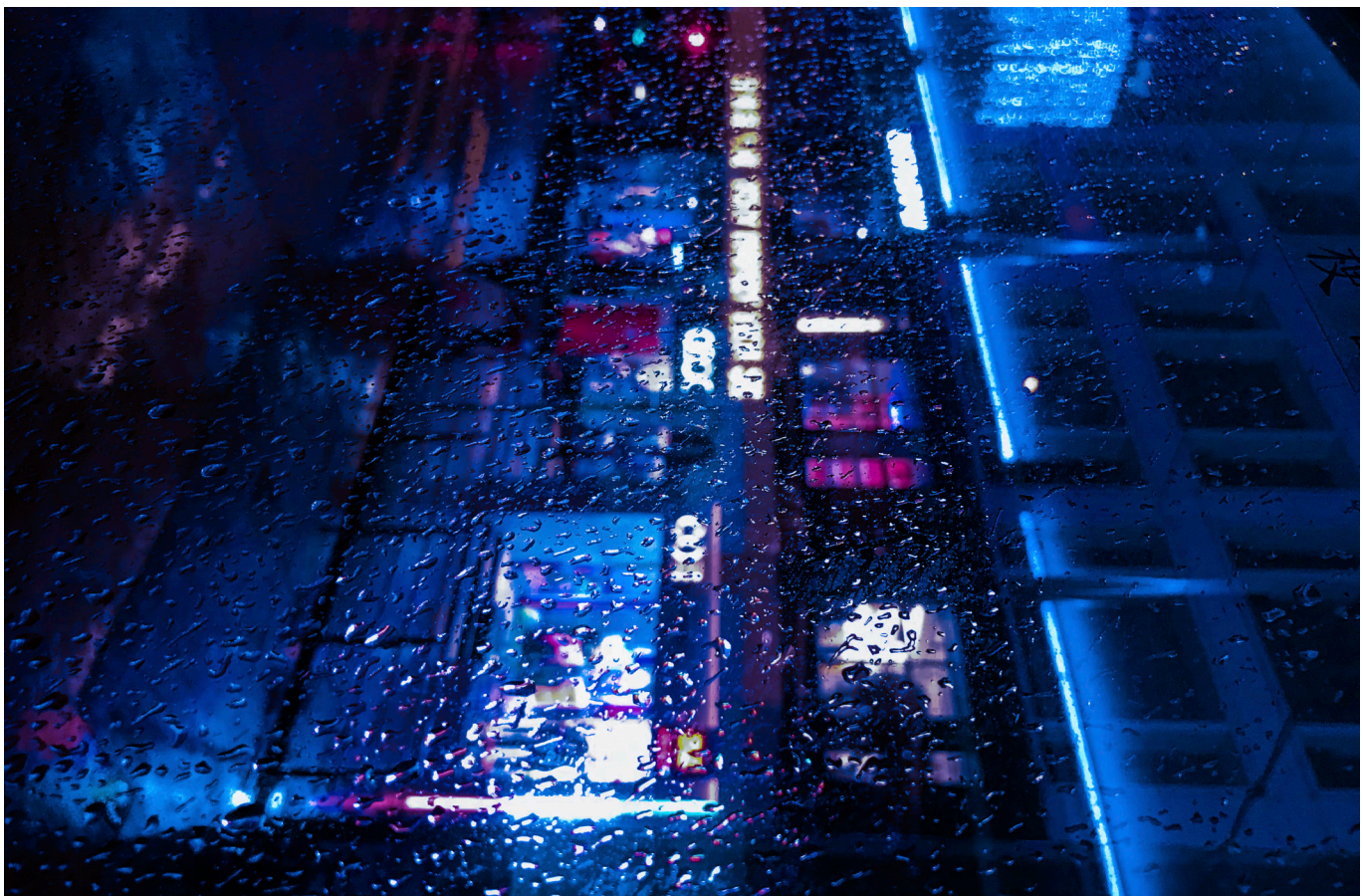

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MONG KOK
11.2019

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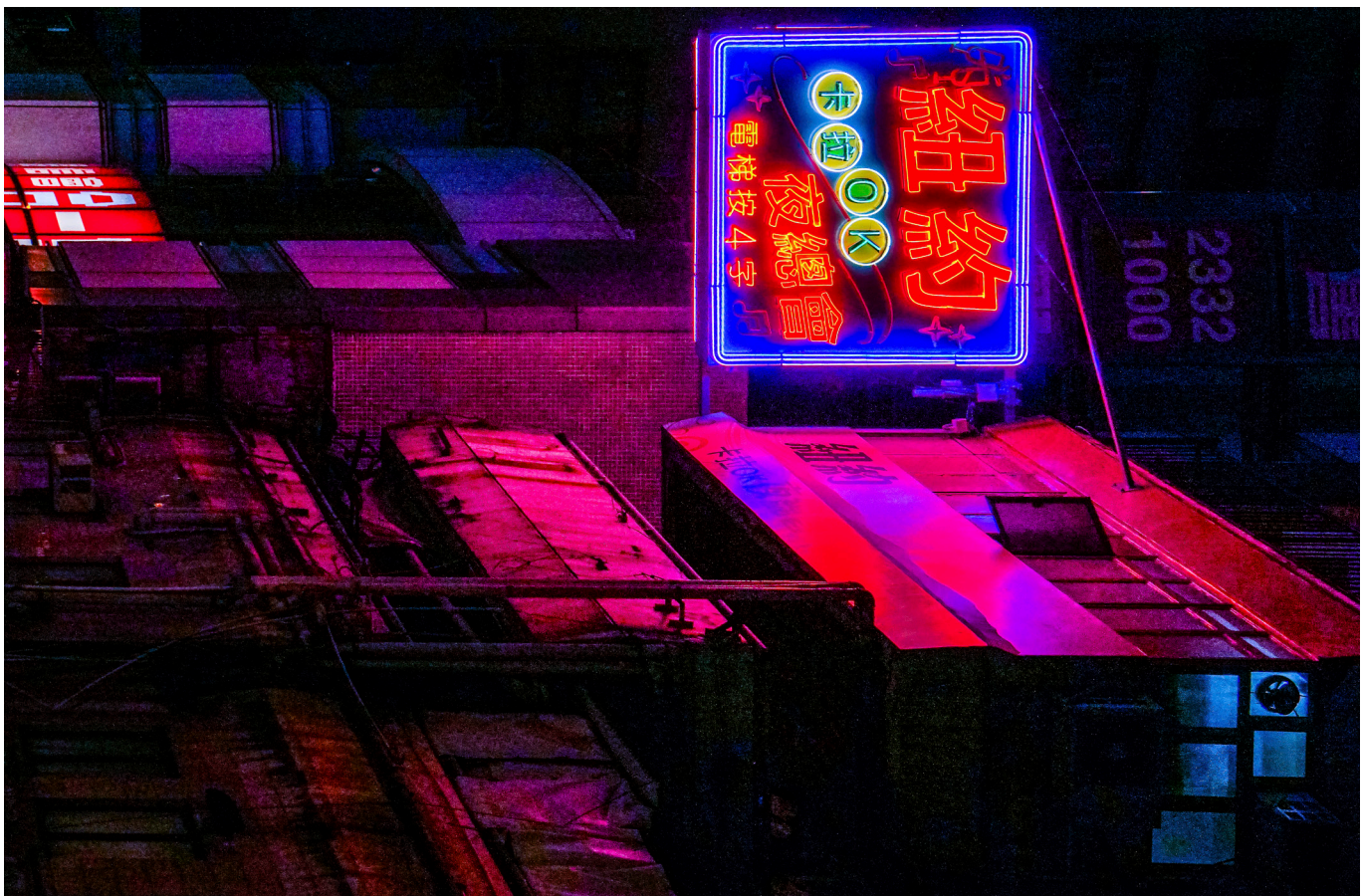

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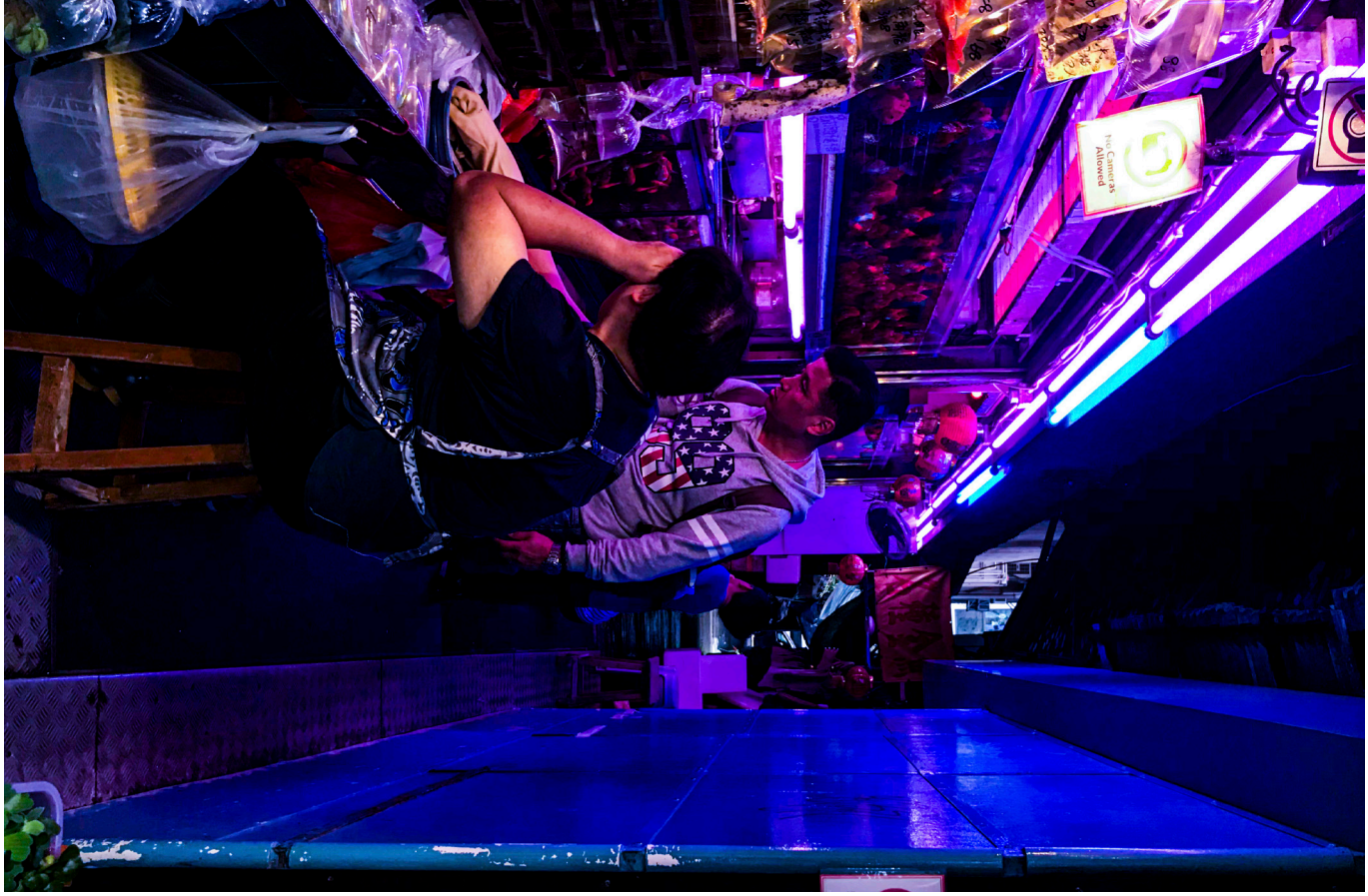

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MONG KOK
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JORDAN
02.2020

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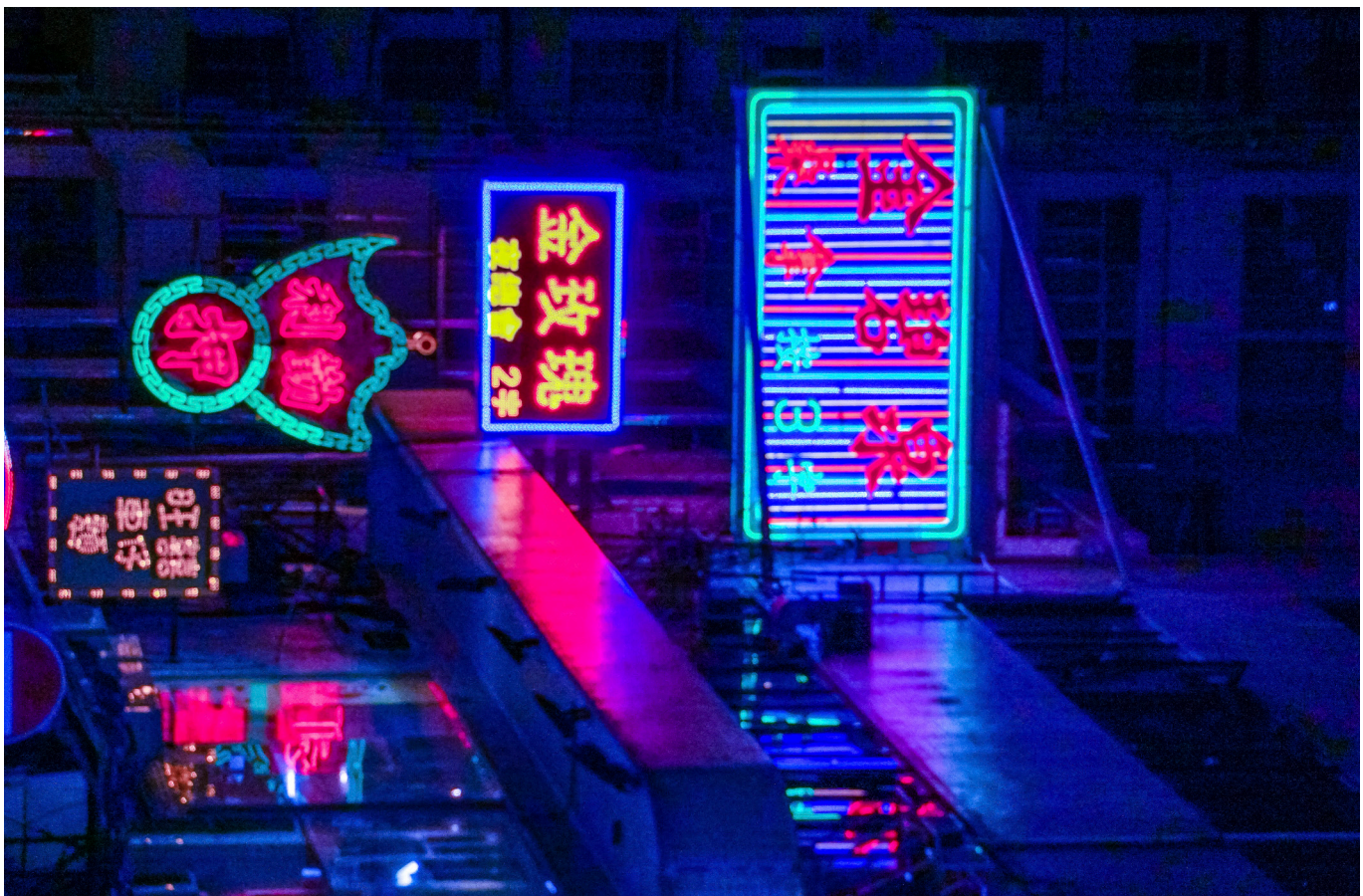

• HK
MID LEVELS
12.2019

• HK
CENTRAL
02.2020

• HK
YAU MA TEI
01.2020

• HK
MONG KOK
12.2019

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CENTRAL
11.2020

• HK
JORDAN
01.2020

•1 RE-DRAW OF A DRAGON CROSSING A DRAGON GATE

WIND AND WATER

風水

“Government cut a road, now known as the Gap, to go to the Happy Valley, the Chinese community was thrown into a state of abject terror and fright, on account of the disturbance which this amputation of the dragon’s limbs would cause to the Feng-shui of Hong Kong; and when many of the engineers, employed at the cutting died of Hong Kong fever, and the foreign houses already built in the Happy Valley had to be deserted on account of malaria, the Chinese triumphantly declared, it was an act of retributory justice on the part of Feng-shui.”[10]

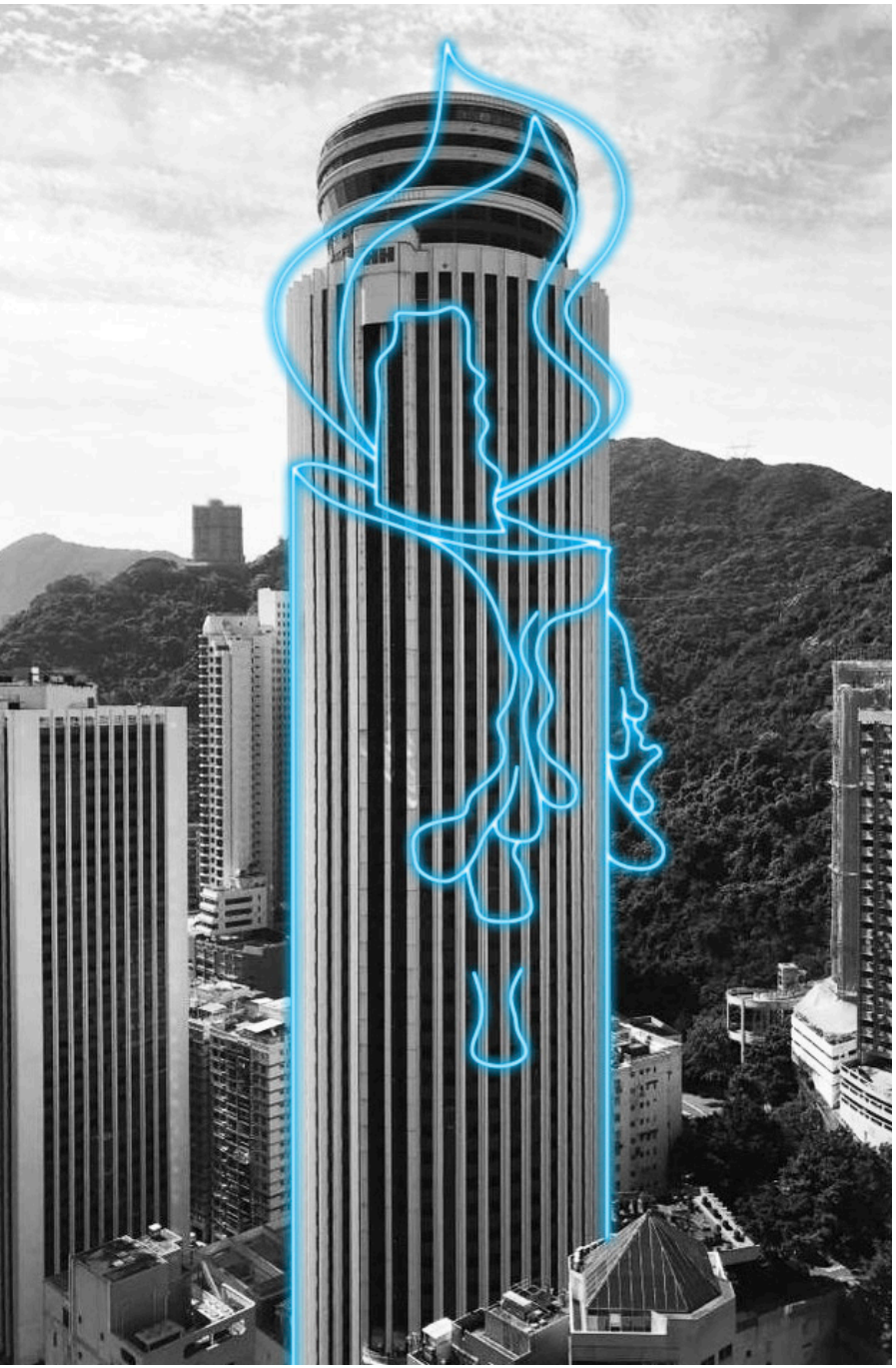
One of the secrets of the Asia’s World City is that, even in the face of technological and economic progress, globalization and superstition, traditions and ancient beliefs will always win out, modernity is governed by an art that has been practiced for centuries: feng shui. The city seems to have one of the best

conformations with respect to the principles of this philosophy, with the mountains of Kowloon that seem to bow to the island as if to protect it and the calm waters of Victoria Harbour where all the energy accumulates, giving prosperity and stability.

Feng Shui, which literally means water and wind, is an ancient Chinese philosophy that aims to harmonize the human being with the environment and the surrounding nature. Everything revolves around the arrangement of the elements and their forms, aslo the ancient Chinese emperors consulted with Feng Shui experts to plan future cities. These principles are still used today to design cities, or buildings, particularly in Hong Kong, where efforts are made to protect the city's excellent layout. While walking around the city, it is easy to come across buildings with large holes that break the almost obsessive repetition of the plans, these large windows do not have a structural reason or wait for the subway to be built, but they are made to allow more easily the daily passage of the dragon from the mountain to the water, reason for which they are named "dragon gate".

International architects had to confront Feng Shui, Norman Foster with the iconic project for the HSBC, consulted with several experts of this Chinese

•2 RE-DRAW OF THE CANNONS THAT SHOULD PROTECT THE HSBC TOWER



•3 RE-DRAW OF THE HOPEWELL CENTER, WHICH WOULD RESEMBLE THE SHAPE OF A CANDLE

philosophy, modifying the project in accordance with these principles, the building is defined as one of the best contemporary architectural examples in tune based on these criteria. The fully open atrium, the large central void, the inclination of the escalators, these are all factors that allow an optimal flow of positive energy. However, Foster's building had to find a way to protect itself from the negative energies coming from the new tower of the Chinese bank.,after the construction of the Bank of China (project by I.M. Pei).

Without taking into account the principles of Feng Shui, the shape of the BOC skyscraper resembled of a blade that, according to "ancient beliefs" would cut positive energy, also called qi emitting negative energy, for this reason on the roof of the HSBC building the structures for washing the facades were highlighted, so as to make them look like cannons capable of rejecting negative energies.

Curious also the case of the Hopewell center, to which, once completed, an unusable swimming pool was added, just because according to Feng shui experts, the shape of the building resembled that of a candle or a cigarette, which represents the threat of fire for its tenants, and thanks to the placement of water on the roof would extinguish any potential fire hazard.

•1 HONG KONG ISLAND, EARLY 1900, WAS ALREADY STARTING TO ENCROACH ON THE SLOPES OF VICTORIA PEAK

VERTICALITY

垂直度

If during the British rule the architecture of Hong Kong was purely colonial, it was after the Second World War, particularly after the end of the Japanese occupation in 1945, that a strong architectural and urban change began to take place in the city.

The end of the occupation left the city of Hong Kong partially destroyed, which had to face the problem of finding accommodation for the many refugees and migrants fleeing the new Chinese regime. At the beginning of the 1950s, construction began on houses for hundreds of thousands of refugees, and with the help of separate funds and non-profit organizations, as many people as possible were provided with a roof over their heads.

New investors also arrived in the perfumed port, escaping from cities like Shanghai or Nanjing and moving their activities into

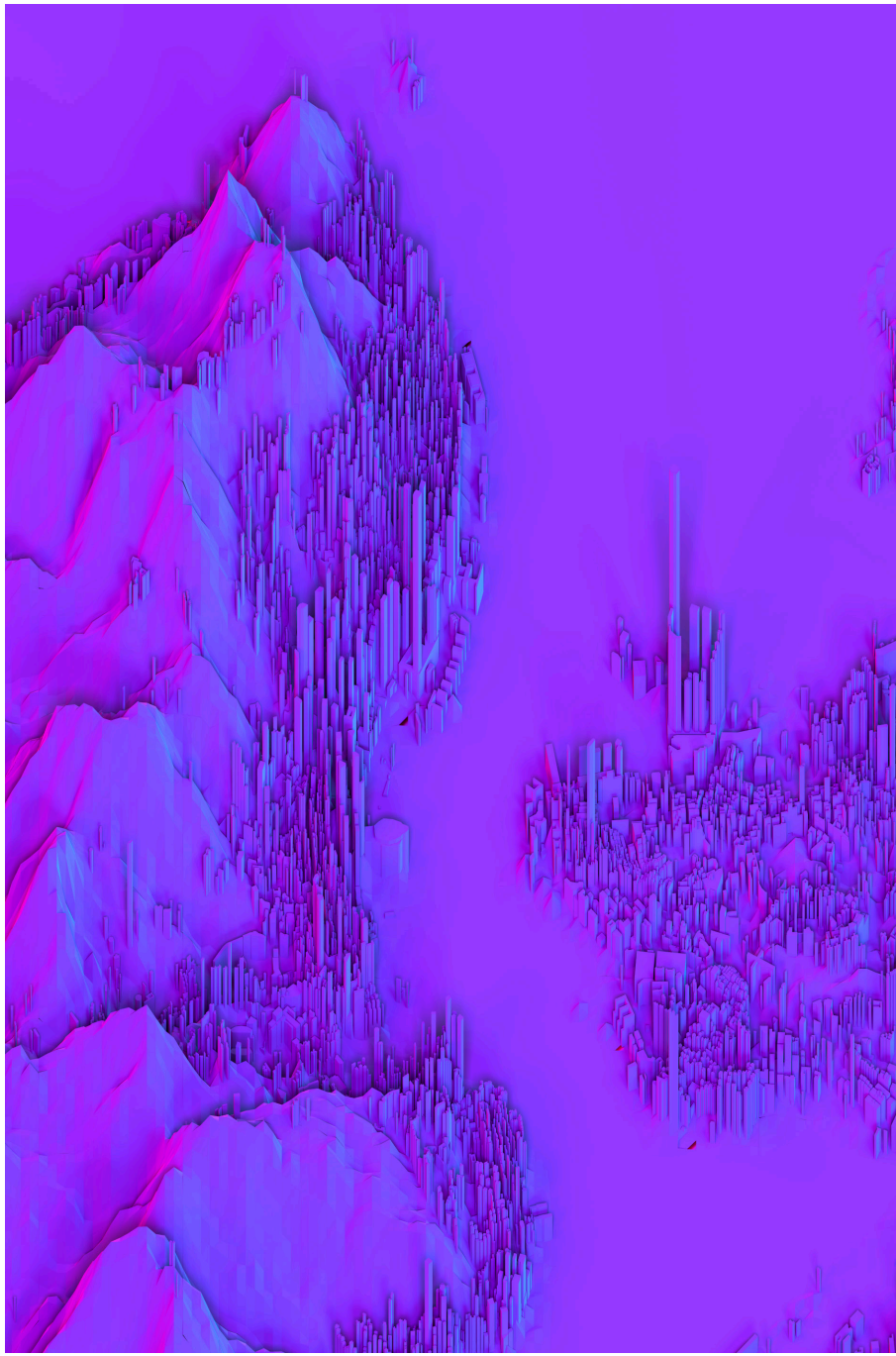
•2 THE EXTREME VERTICALITY OF HONG KONG,
SEEN FROM GOOGLE MAPS

the city from the free economy.

All these factors led to a very rapid increase in the population, which also saw the children of the first recipients of public housing reach an age where they left their families. After the intensive development of public housing estates, residents were able to find a place to live and work.

In the early 1970s, as the sector was updated and the economy progressed, Hong Kong residents were increasingly able to buy their own property. As a result, public residential buildings were either purchased by residents themselves or eft empty by the previous inhabitants , leaving their housing units vacant for new tenants. This huge demand for new housing led to the construction of new residential centres, both public (as was already the case) and private, which saw excellent earning opportunities. As a consequence, this combination of factors in addition to the limited land available and the high price of the plots led investors to build increasingly dense and high residential centers, in the name of efficiency and possible income. (Charlie Q.L. Xue 2016)

In 1971, fifty percent of the population lived in a high rise building. An important date



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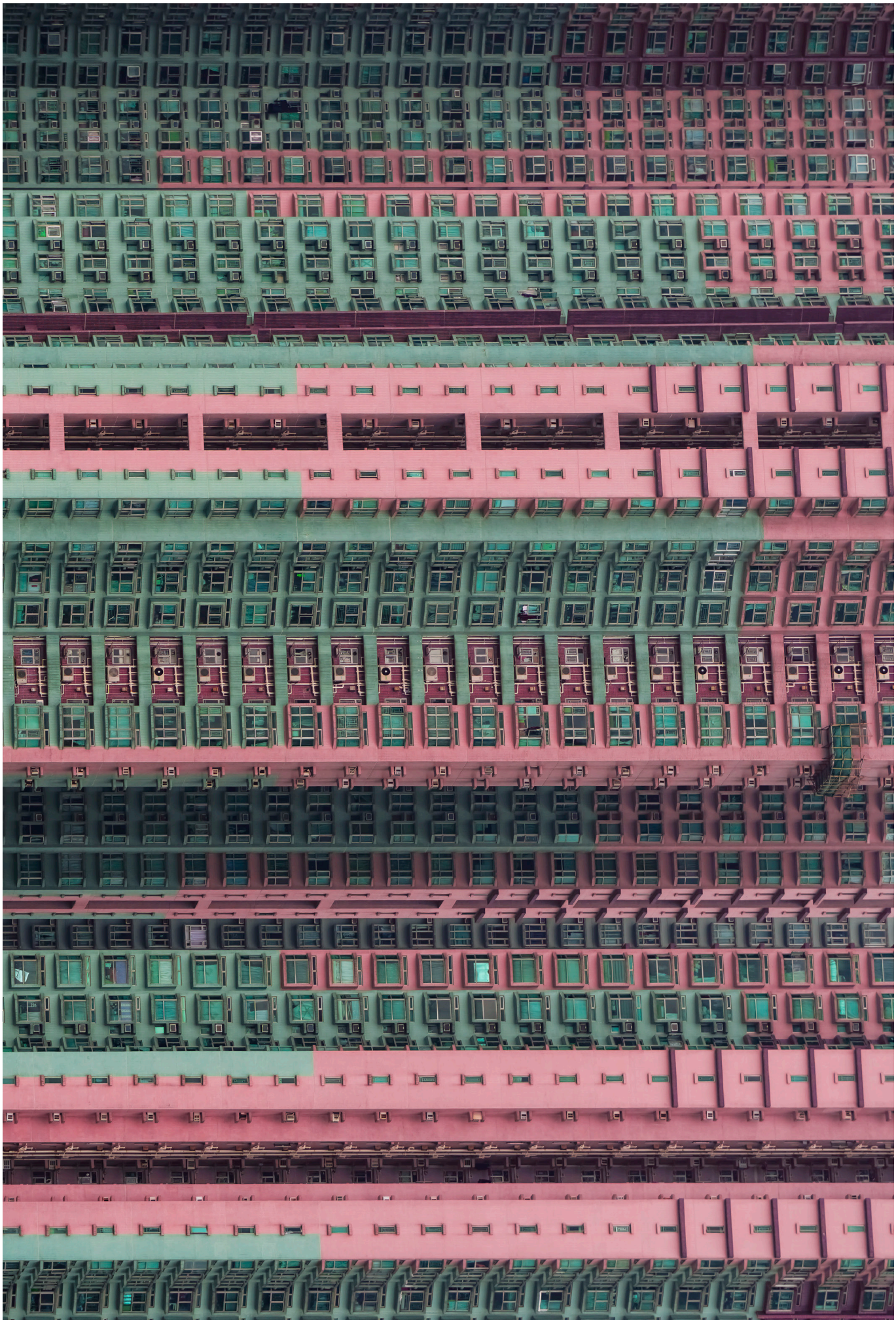
Po Lam
02.2020



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•HK
FFORTRESS HILL
12.2019

•HK
CHOI HUNG
12.2019

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•HK
FFORTRESS HILL
12.2019

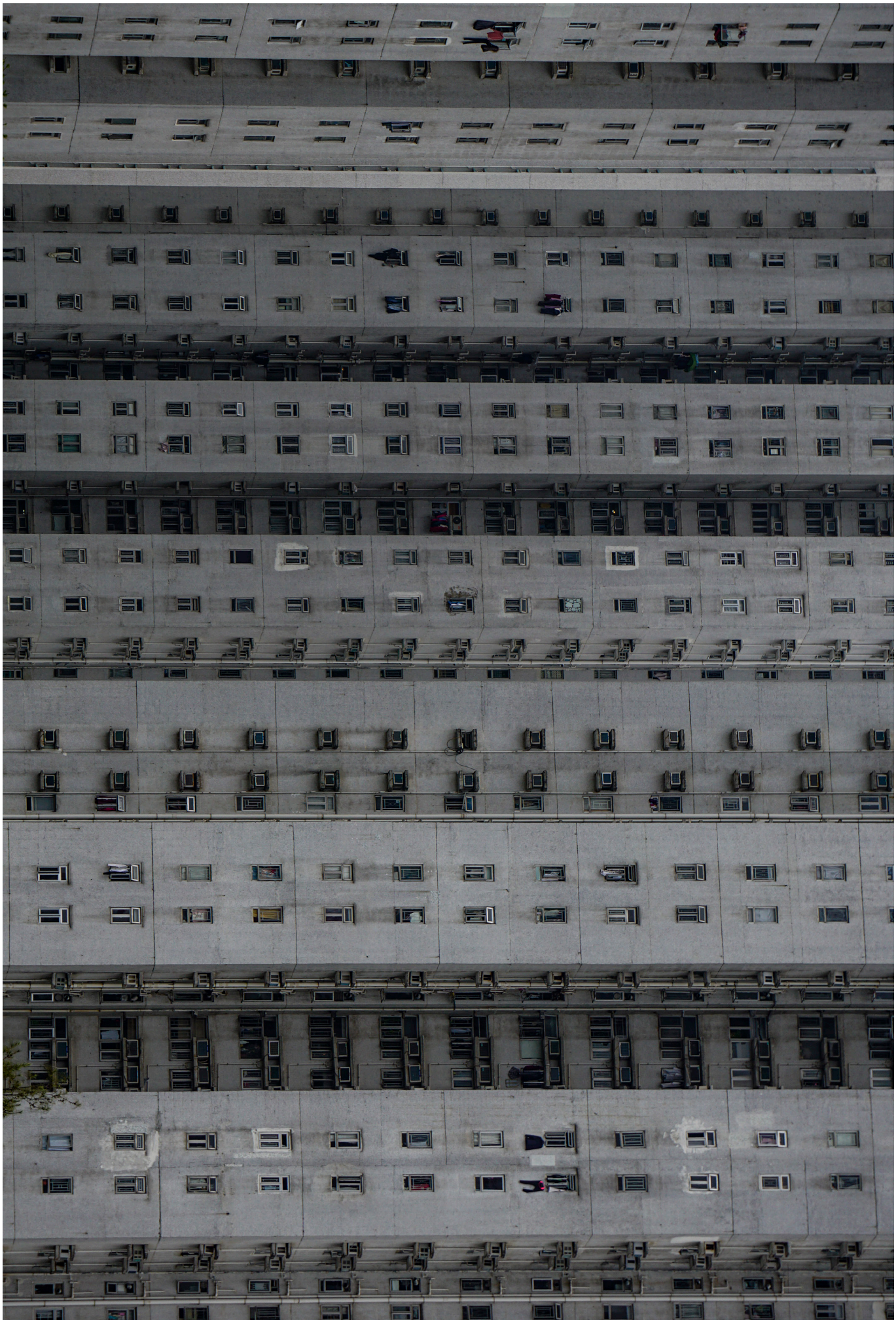
•HK
QUARRY BAY
12.2019

in Hong Kong's architectural development was when in 1979 the nearby Chinese city Shenzhen was allowed to be a special economic zone. This changed both the city and its architecture, as many industries moved their factories either to the border or to Shenzhen, leading Hong Kong to become more and more a global financial hub and as a result the architecture and high-rise buildings changed connotation becoming more and more of a landmark.

Hong Kong's architecture has always been focused on the pursuit the maximum efficiency, in terms of space use, land use and prefabrication. This has produced a city almost with modernist visions, but declined in greater density, the result of this construction has led to a homogenization of architecture, in which the multiplication of the model plan or infinite modules times gave rise to almost dystopian urban landscapes.

Concrete labyrinths in which only the podiums, from where the towers start, soften the attack on the ground of these human hives. The volumes connecting the ground and high rise buildings become the place of the functional mixitè: inside them we find mainly commercial spaces or spaces connecting to other podiums through bridges.

•HK
TSEUNG KWAN O
12.2019



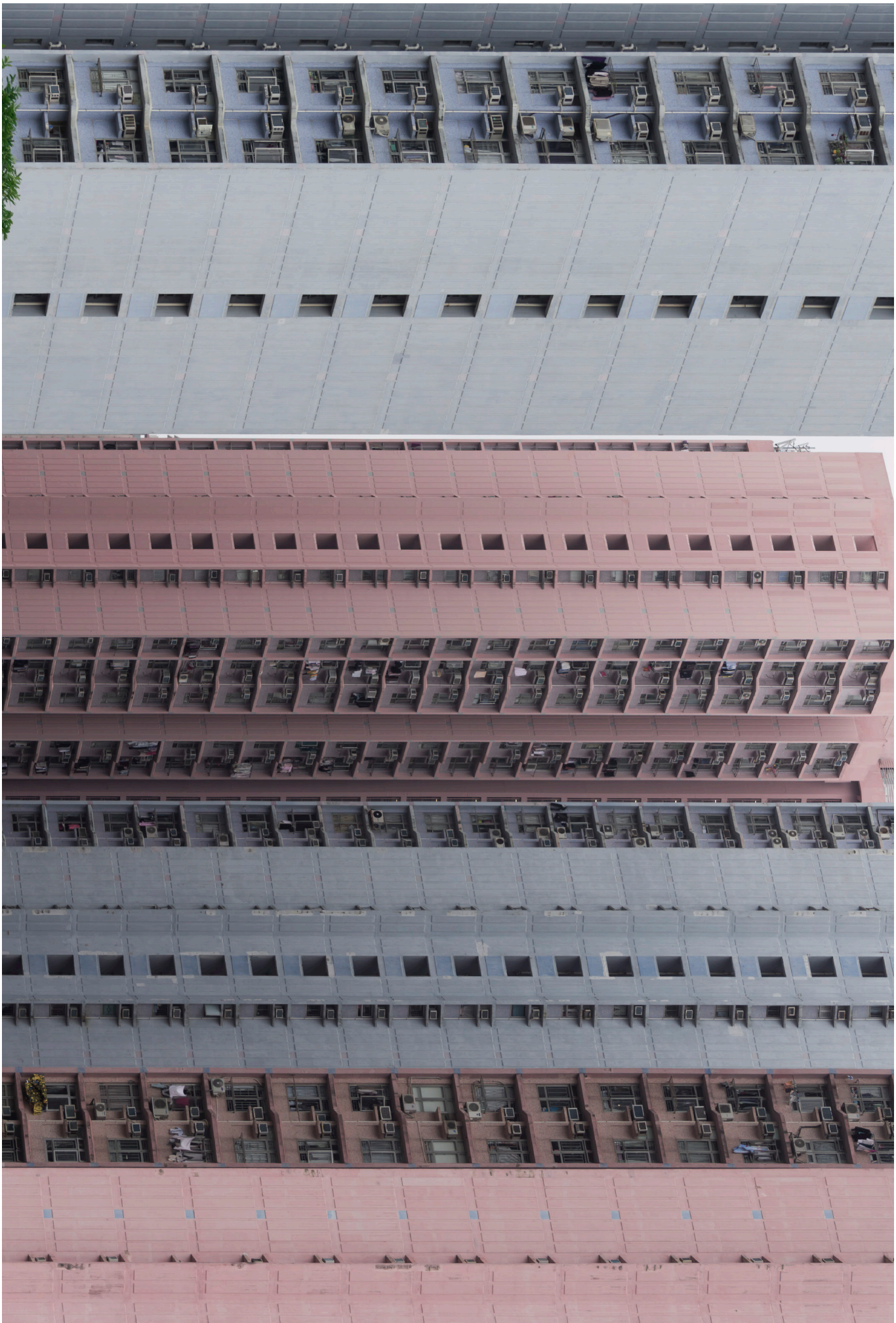
It was almost natural, in an environment with scarcity of land, the evolution of increasingly hybrid buildings that incorporated different functions and different forms within them, that is was not an equal repetition of the plans but a new complexity, both formal and program level. One of the most virtuous examples is the project of the Hysan Plcace 2012 (the first Platinum LEED in HK) by KPF/DNL, a project located in the commercial heart of Causeway Bay, that manages to innovate the type of skyscraper in Hong Kong thanks to the creation of a porosity, which creates different public spaces at different heights. (Man, Chung 2019)

Already with the appearance of the first air links between three skyscrapers the verticality of Hong Kong went from being simple towers in a territory to vertical fabric.

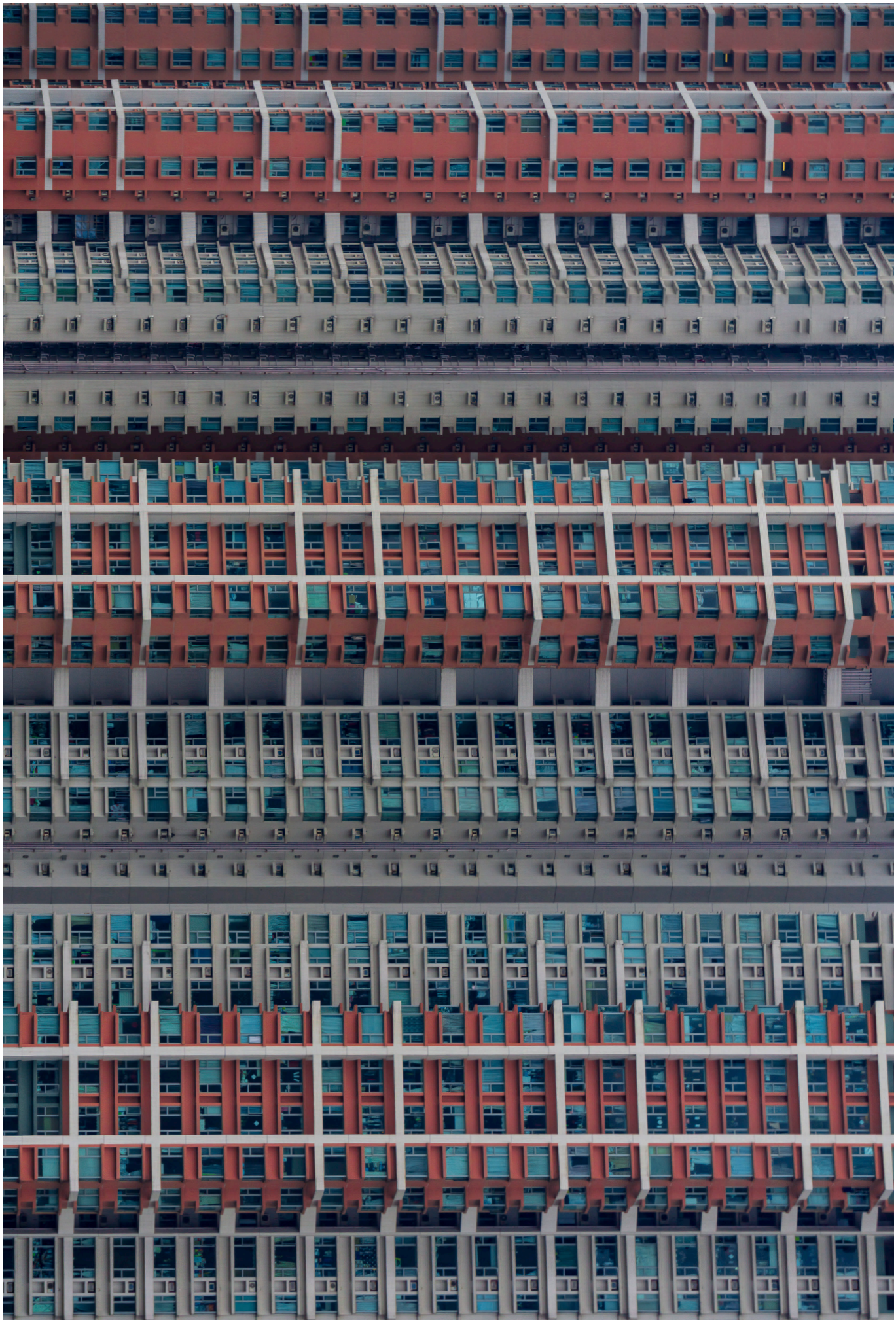
An important moment on the evolutionary understanding of the skyscraper typology in Hong Kong corresponds with the exhibition at the Venice Biennale in 2018: Vertical Fabric Density in Landscape.

•HK
KENNEDY TOWN
01.2020

•HK
TSEUNG KWAN O
02.2020



•HK
TSEUNG KWAN O
12.2019



“Looking down on Hong Kong’s Central district from Victoria Peak, one sees that the city’s vertical fabric comprises a wave of towers springing up from the sloping terrain down to the harbour front, spreading along the waterfront as a belt of tightly woven texture. The slender towers, framed by the city’s land economy and its demands for density, establish the city’s dominating typology, not only governing the urban skyline but also shaping its daily urban and architectural experiences. Distinguishing itself from other global cities, Hong Kong is unique in having an urban form celebrating an aesthetic of density while comprising a gigantic rhetoric of speculation for both transaction and consumption.”[11]

This is how the exhibition curators Weijen Wang, Thomas Chung and Tsang Thomas introduce their pavilion. Exploring the theme of the freespace in Hong Kong, they used the tower as an emblem of vertical growth and conquest of the only free space in the Asian city: the sky.

Architects from all over the world (in 89 different groups) realized 114 visions on the development of the tower building: they were given the basis from which

•3 HONG KONG PAVILION, BIENNALE DI ARCHITETTRUA, VENICE, 2018

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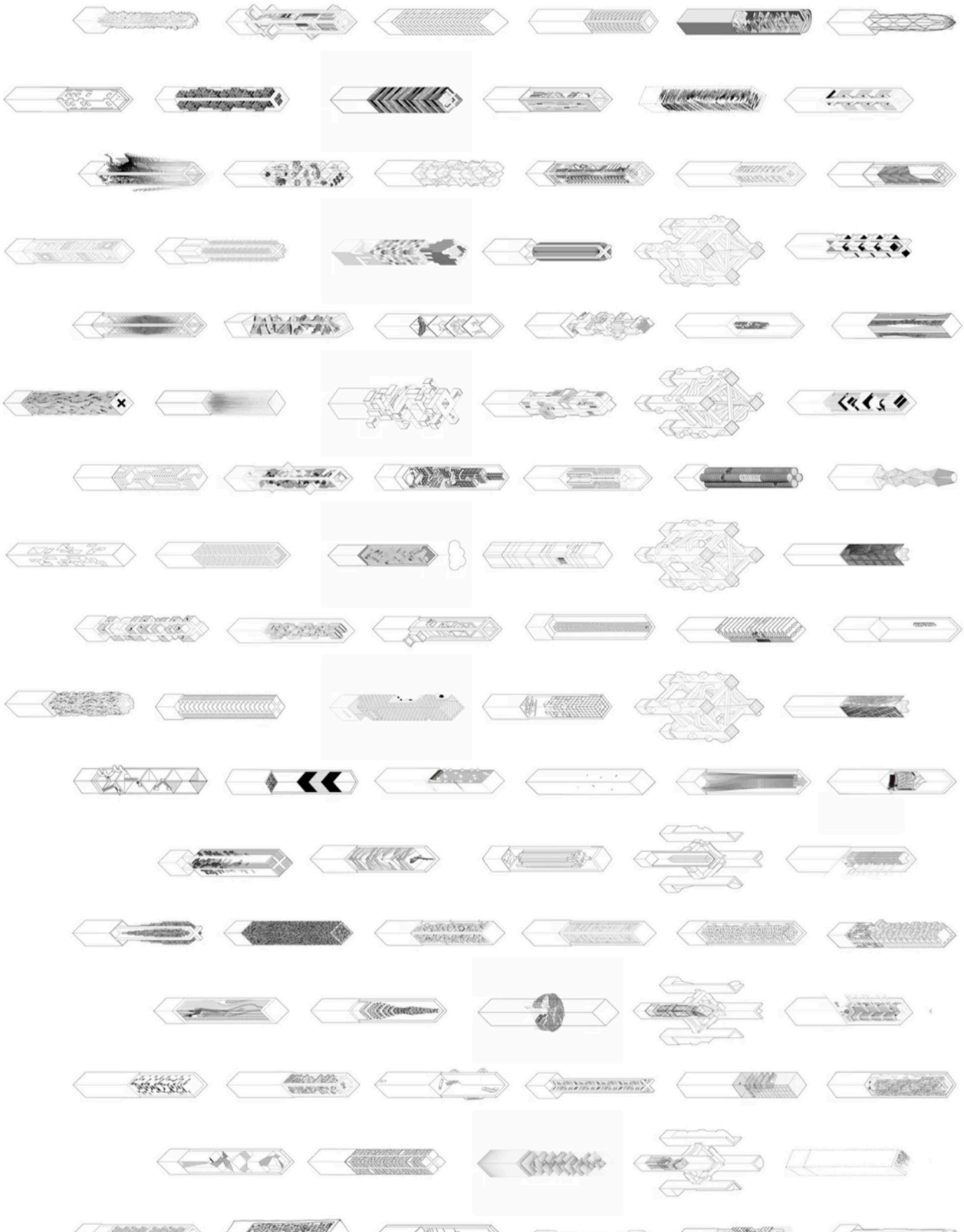

137

to build the towers, and three different types of cores, with three different base heights. It was one of the last moments of confrontation and discussion on the verticality phenomenon in the Asian city.

Nowadays in the existing verticality of Hong Kong the idea of the monumental destruction of the skyscraper is becoming more and more solidified, but it is pierced by myriads of bridges, walkways and accesses that allow anyone to be part of that structure considered elitist until before, the skyscraper has become part of the urban fabric.

•HK
CENTRAL
01.2020

•HK
KENNEDY TOWN
01.2020

• BRIDGE N°18
CAUSEWAY BAY
01.2020

BRIDGES

橋樑

Walking around Hong Kong, one of the first things you notice is that you often find yourself crossing kilometers without ever touching the ground.

You easily find yourself in a chaotic system of underground or aerial passages, elevators, escalators, you enter buildings, shopping malls without wanting to, but without ever having your feet on the ground, bridges become part of a dense network of public transport, but in this case you do not use a moving and transporting element (apart from elevators or escalators), but static elements in which people are moving and not the wagons.

This definable system of human distribution unites public or private buildings and creates a network that at first glance can be chaotic, but once entered, the system reveals its incredible efficiency.

• BRIDGE N°1
CENTTRAL
01.2020


• BRIDGES MAP IN THE NORTHERN PART OF THE

Skybridges, or more simply bridges, connecting two or more buildings are increasingly at the center of architectural debate, the connections between tall buildings are increasingly flourishing, fueling the search for new technologies, or elevators for their construction, but the idea of having elements connecting buildings dates back to the last century.

When the enthusiasm for the new architectural typology of skyscrapers led thinkers of the time to imagine the first skybridges. One of the forerunners was Erastus Salisbury who, with his representation “Historical Monument of the American Republic” in 1876, showed a concentration of classical-inspired towers with bridges at the top of them. The first visions of cities where buildings were connected by a complicated multitude of bridges emerged due to serious urban problems.

The continuous appearance of new tall buildings and the increasing presence of vehicles overcrowded the streets, fuelling visions of a multi-level traffic system, and many architects and urban planners represented visions of complex city systems: between 1921-29, many were called upon to develop Manhattan’s urban future.

• BRIDGE N°19
CAUSEWAY BAY
01.2020

• BRIDGE IN
TSEUNG KWAN O
01.2020

• BRIDGE N°3
CENTRAL
02.2020

The architectural consultant Corbett proposed a separation between pedestrian and vehicular traffic. In collaboration with Hugh Ferris, he designed a plan that raised the sidewalks by one floor, which could be recessed into buildings as porticoes or cantilevered onto the street, connected by bridges.

In Europe, as well, the advent of the skyscraper and new building technologies fueled visions of multilevel cities. Corbett's plans were published in the Italian illustration and Vokurg Sveta in Russia in 1913. In Italy Antonio Sant Elia in The New City, provided for skybridges and terraces connecting the various buildings and vertical distribution systems,although with a more mechanized vision of a city.

On the scene of Russian constructivism was El Lissitzky with his projects, for The Wolkenbugel: where the bridge is not only useful for transporting people but becomes an architectural element with functions within it, and on the cover of Richard Neutra's book, Amerika. If in Sant Elia's work the skybridges were not central, but simply part of the machine city, in Aguste Perret's work the connection between two or more buildings becomes more explicit. Perret's visions saw high towers raised on pillars, so that the

• BRIDGE IN CENTRAL 11.2019

ground floor was free, a series of bridges connecting skyscrapers creating almost a new zero floor and a second series of bridges at a height of about 60 meters.

We will have to wait until the sixties to see the first signs of bridges between buildings at significant heights, of first connections between buildings there is trace already in the Middle Ages.

The National Congress Secretariat, by Oscar Niemeyer, in which a 3-storey link joins the two towers, creating greater distribution efficiency, from then on made their appearance all over the world. One of the most iconic projects are the Petronas Towers in Kuala Lumpur, where Pirelli designed two twin towers, at the time of construction they were the tallest in the world, connected by a bridge on two levels at 171 meters above ground level (Daniel Safarik). The design of new skyscrapers is increasingly moving towards the union of two or more buildings through connections that can take on different forms and functions, becoming part of the building as in the case of the CCTV building by Rem Koolhaas.

As mentioned earlier, one of the things that most impresses when walking around the former

• BRIDGE N°1
CENTRAL
11.2019

• BRIDGE N°18
MONG KOK
12.2019

English colony is the presence of bridges and pedestrian crossings that intersect each other, allowing you to cross portions of the city without ever touching the ground. They are present everywhere in the city and there are 1222 of them between aerial and underground passages (Hong kong the facts: Highways).

Initially used to easily overcome steep terrain or watercourses, with the exponential demographic and economic growth since 1960's, more and more bridges began to be built so as to divorce pedestrian traffic from vehicular traffic. Starting in the 1980s, networks of footbridges or subways began to develop, so as to allow a continuous flow of people to cross city areas without producing congestion, also providing a suggestive new point of view on urban space.

In order to better understand nature and how these new urban spaces that strongly characterize the city's landmark , thirty footbridges, with different conformations, have been analyzed. The cataloguing was drawn up by subdividing them according to their urban area, identifying their exact location and their respective points of support based on whether they are another building, a bridge, or ending up bringing the user to ground level.

• TAXONOMY OF SOME OF THE MAIN TYPES OF BRIDGES

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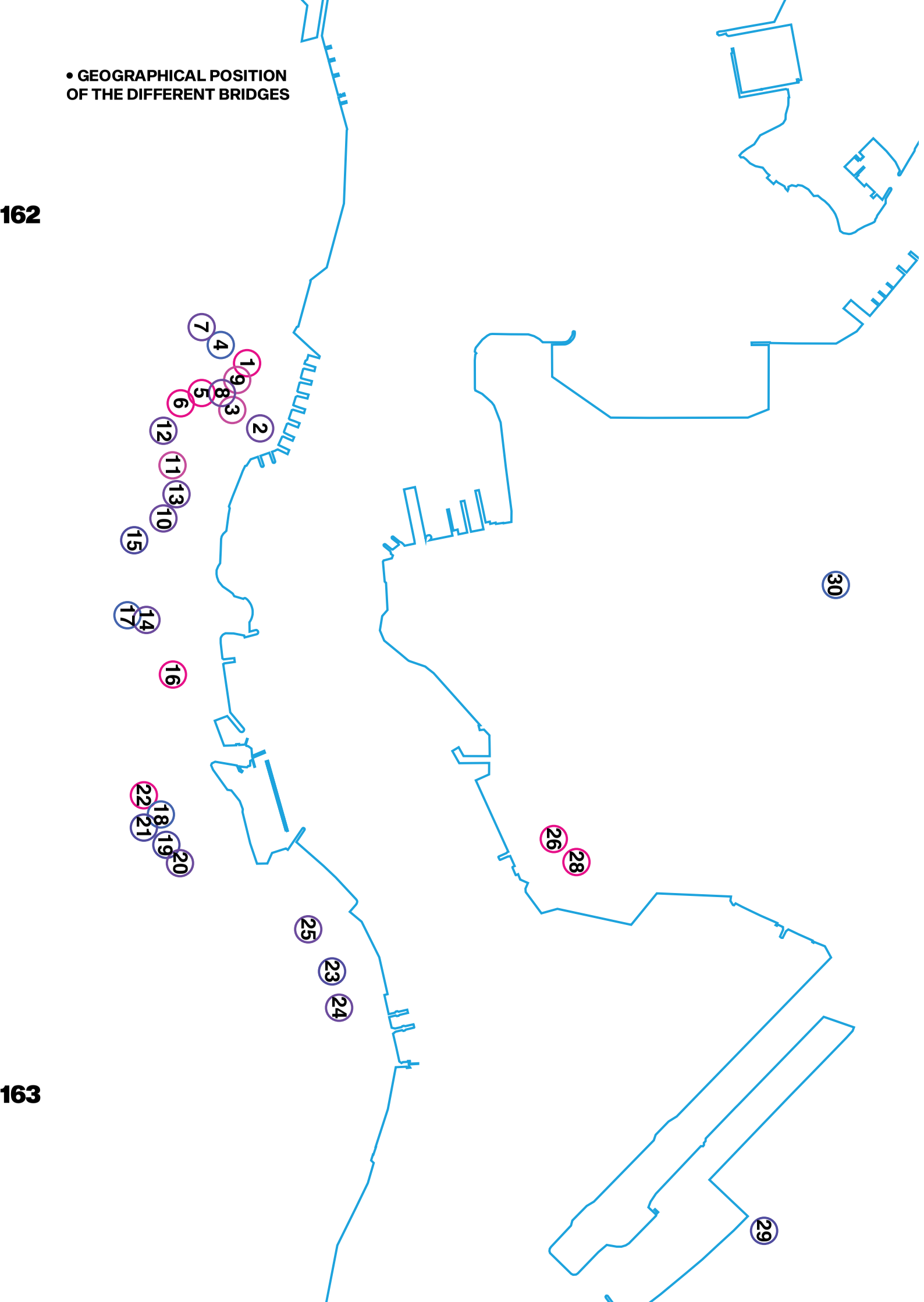
• GEOGRAPHICAL POSITION
OF THE DIFFERENT BRIDGES



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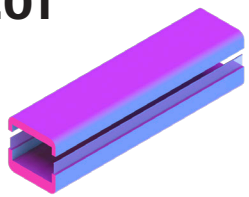
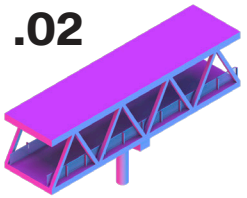


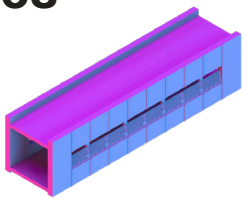
CENTRAL
22°17'4.00"N
114° 9'20.96"E
building < > building

.02



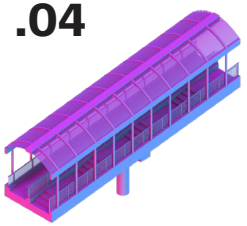
CENTRAL
22°17.5'89" N
114°9'36.32" E
building < > bridge

.03



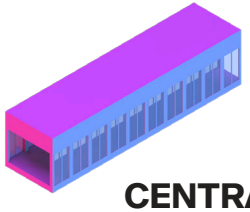
CENTRAL
22°16'58.33"N
114° 9'30.89"E
bridge < > bridge

.04



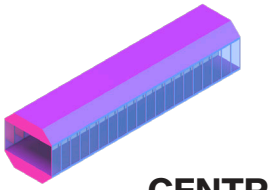
CENTRAL
22°16'58.51"N
114° 9'15.21"E
bridge < > end

.05



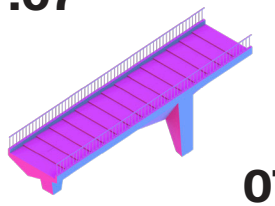
CENTRAL
22°16'52.28"N
114° 9'30.11"E
building < > building

.06



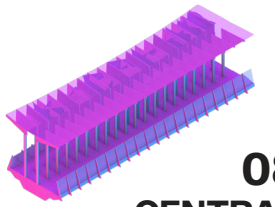
CENTRAL
22°16'50.56"N
114° 9'32.47"E
building < > building

.07



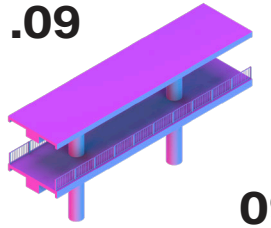
07
CENTRAL
22°16'55.12" N
114° 9'13.92" E
bridge < > bulding

.08



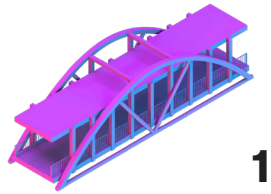
08
CENTRAL
22°16'58.34" N
114° 9'29.47" E
bridge < > building

.09



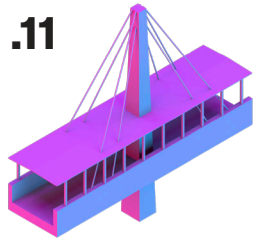
09
CENTRAL
22°17'4.66" N
114° 9'24.66" E
bridge < > bridge

.10



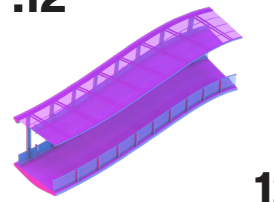
10
ADMIRALTY
22°16'45.97" N
114° 9'58.63" E
bridge < > bridge

.11



11
ADMIRALTY
22°16'48.21" N
114° 9'46.77" E
bridge < > bridge

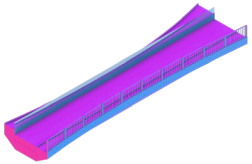
.12



12
ADMIRALTY
22°16'46.48" N
114° 9'39.72" E
bridge < > building

• BRIDGE N°7
MONG KOK
12.2019

.13

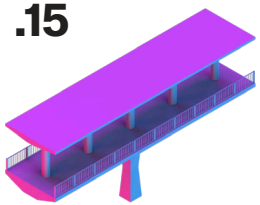


13
ADMIRALTY
22°16'47.42" N
114° 9'54.55" E
bridge < > building

.14

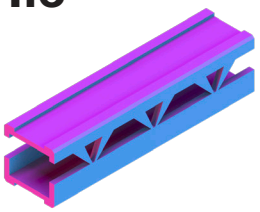
14
WAN CHAI
22°16'41.81" N
114°10'23.77" E
bridge < > building

.15



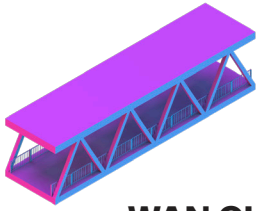
15
WAN CHAI
22°16'40.21" N
114°10'4.21" E
end < > end

.16



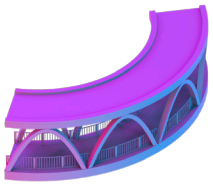
16
WAN CHAI
22°16'50.68" N
114°10'33.32"E
building < > building

.17



17
WAN CHAI
22°16'39.63" N
114°10'23.57" E
end < > bridge

.18

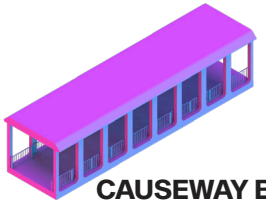


18
WAN CHAI
22°16'46.57" N
114°11'10.77" E
end < > building

• BRIDGES CATALOGUING 13-18

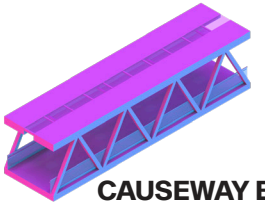
• BRIDGES CATALOGUING 19-24

.19



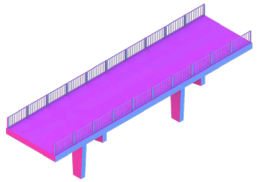
CAUSEWAY BAY
22°16'46.80" N
114°11'17.22" E
end < > end

.20



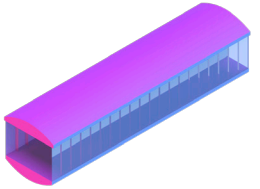
CAUSEWAY BAY
22°16'50.49" N
114°11'22.04" E
bridge < > building

.21



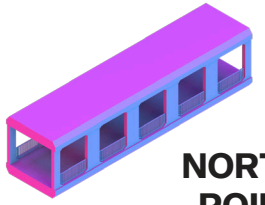
CAUSEWAY BAY
22°16'44.44" N
114°11'13.99" E
end < > end

.22



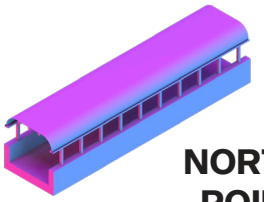
CAUSEWAY BAY
22°16'43.71" N
114°11'6.14" E
building < > building

.23



NORTH POINT
22°17'25.50" N
114°11'48.28" E
end < > end

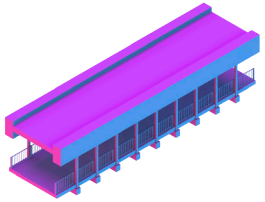
.24



NORTH POINT
22°17'27.00" N
114°11'55.94" E
bridge < > building

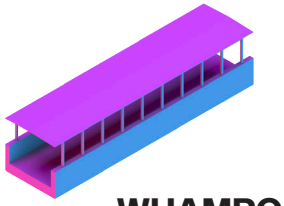
• BRIDGE N°14
MONG KOK
11.2019

.25



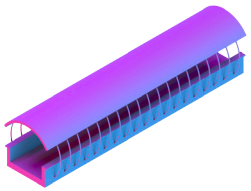
FORTRESS HILL
22°17'18.90" N
114°11'38.17" E
building < > bridge

.26



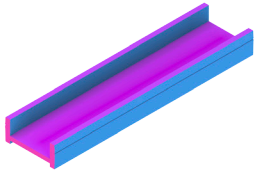
WHAMPOA
22°18'15.08" N
114°11'15.79" E
building < > building

.27



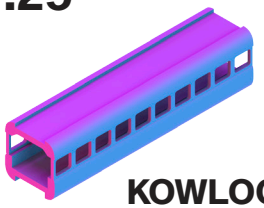
FO TAN
22°23'35.63" N
114°11'56.14" E
end < > end

.28



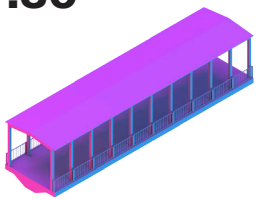
WHAMPOA
22°18'19.17" N
114°11'20.85" E
building < > building

.29



KOWLOON BAY
22°19'2.37" N
114°12'48.28" E
end < > end

.30



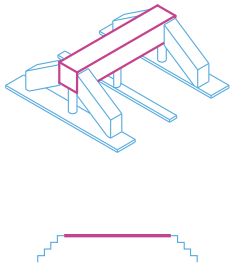
MONG KOK
22°19'15.31"N
114°10'11.82"E
end < > bridge

The results of the analysis of the bridges taken into consideration are many, this means of public transport become a real urban space, so the information derived from their observation is useful to understand how the multiple ground floor of the city is now part of the everyday life of the population.

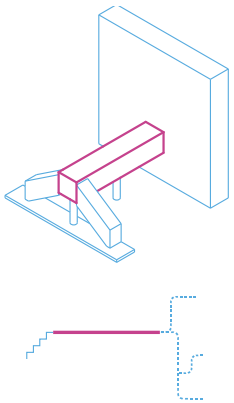
A bridge is a structure that connects two points, the importance of understanding which points are joined together helps to understand the use of this means of transport. In the classification, the two extremes of bridges have been indicated, which have been schematized later.

Another point of analysis was the access to these structures: direct access on ground level (if you are already at the height of the bridge), elevators, stairs, or ramps. The way in which these systems connect to existing buildings was also schematics, a factor that often indicates their intended use in the sense that the more the crossing passes through the building the more its internal function is public, the more detached it is, the smaller influx of people it wishes to have.

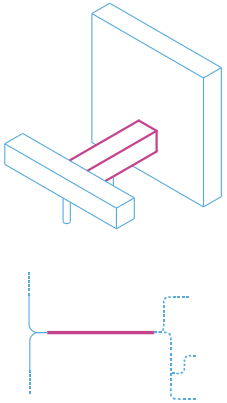
Another crucial point of view



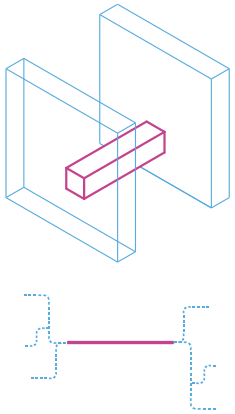
END <>END



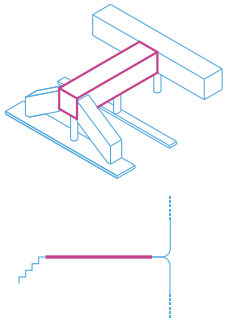
END<>BUILDING



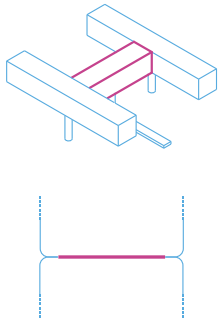
BRIDGE <>BUILDING



BUILDING<>BUILDING



END <>BRIDGE



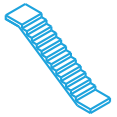
BRIDGE <>BRIDGE

• BRIDGES CONNECTIONS

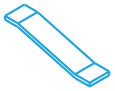
• 1 RESULTS OF BRIDGE ANALYSIS

ACCESS

DIRECT ACCESS



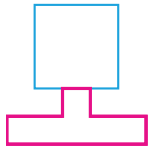
STAIRS OR ESCALATORS



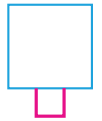
RAMP

ELEVATOR

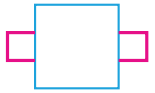
TYPES OF CONNECTION



DIRECT ACCESS



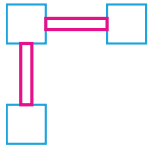
STAIRS OR ESCALATORS



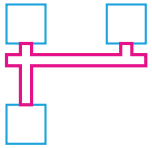
RAMP

ELEVATOR

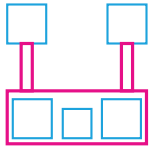
PEDESTRIAN BRIDGE SYSTEM



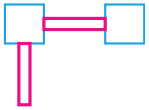
LINEAR CONNECTION



PARALLEL CONNECTION



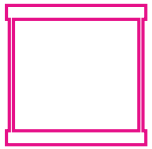
PODIUM CONNECTION



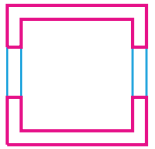
SERIES CONNECTION

TYPES OF SECTION

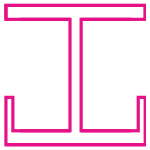
DIRECT ACCESS



STAIRS OR ESCALATORS



RAMP

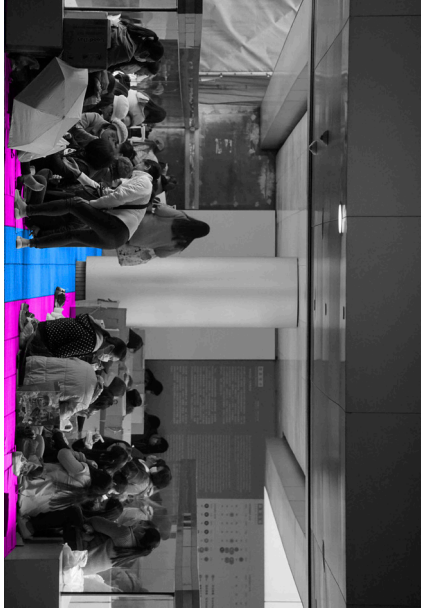


ELEVATOR

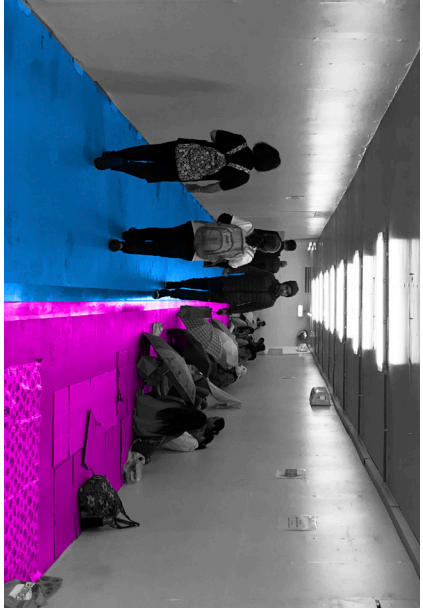
• BRIDGE N°30
MONG KOK
12.2019

• BRIDGE N°2
MONG KOK
01.2020

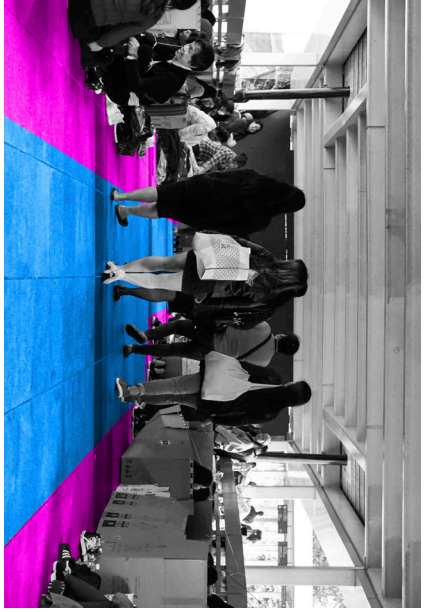
• BRIDGE N°3
MONG KOK
01.2020



• USE OF THE BRIDGE N°1
CENTRAL
01.2020



• USE OF A BRIDGE
CENTRAL
01.2020

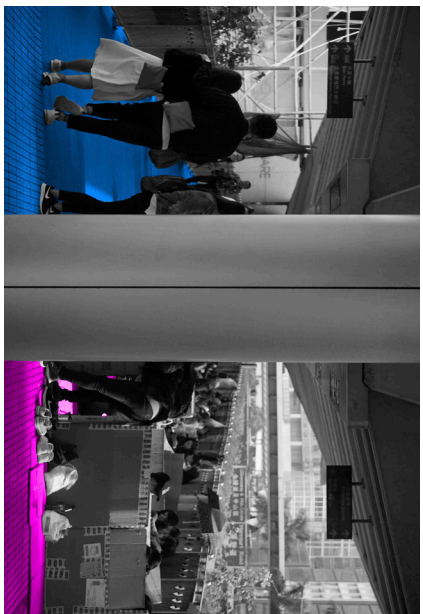


• USE OF THE BRIDGE N°14
ADMIRALTY
01.2020

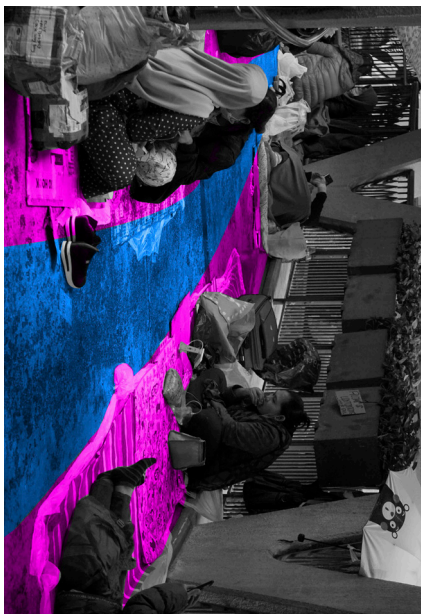
• DIFFERENT USES OF SEVERAL BRIDGES
MOTION , STATIONING

• USE OF THE BRIDGE N°30
MONG KOK
12.2019

• USE OF THE BRIDGE N°9
CENTRAL
01.2020



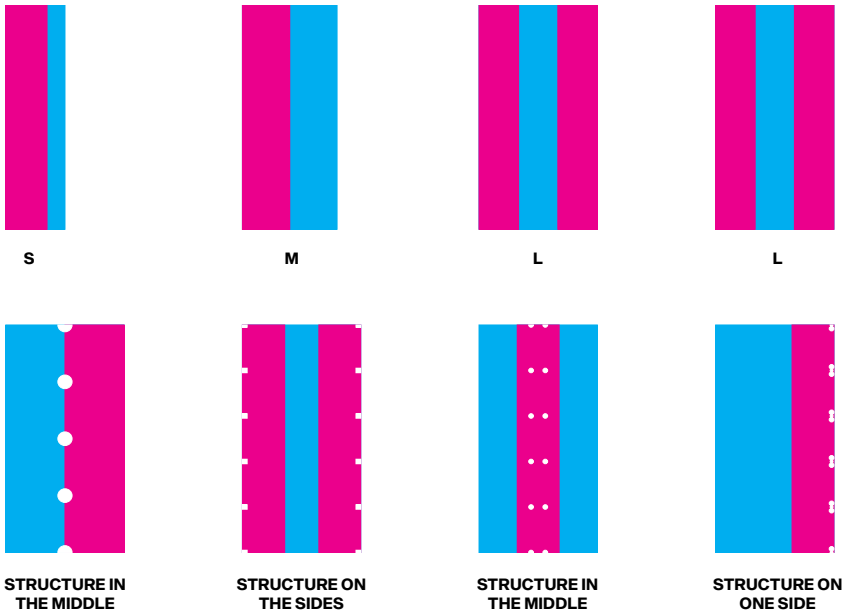
• USE OF THE BRIDGE N°18
ADMIRALTY
01.2020



is the study of the section, according to the opening to the outside changes its role, common is that the more it is open the more it is public while if it is closed is private or semi-private and indicates that inside there is temperature control.

One of the most important aspects is that the bridges of Hong Kong, have become part of the fabric of the city, colonized by the inhabitants not only as streets areas to move around the city but also as public space. In this case, it is interesting to formally understand the subdivision of the travel part and the more static area, and it came out that three are the main factors: the connection with other bridges, the width of the bridge and the structure. It has been noted that there is a clear division between the two functions, the larger it's the size of the elevated structure and the more defined is the separation between the station and the only one passing through having different configurations.

• DIFFERENT USES OF BRIDGES ACCORDING TO WIDTH AND STRUCTURE. MOTION , STATIONING



• HK
CENTRAL
01.2020

PUBLIC
NO SPACE

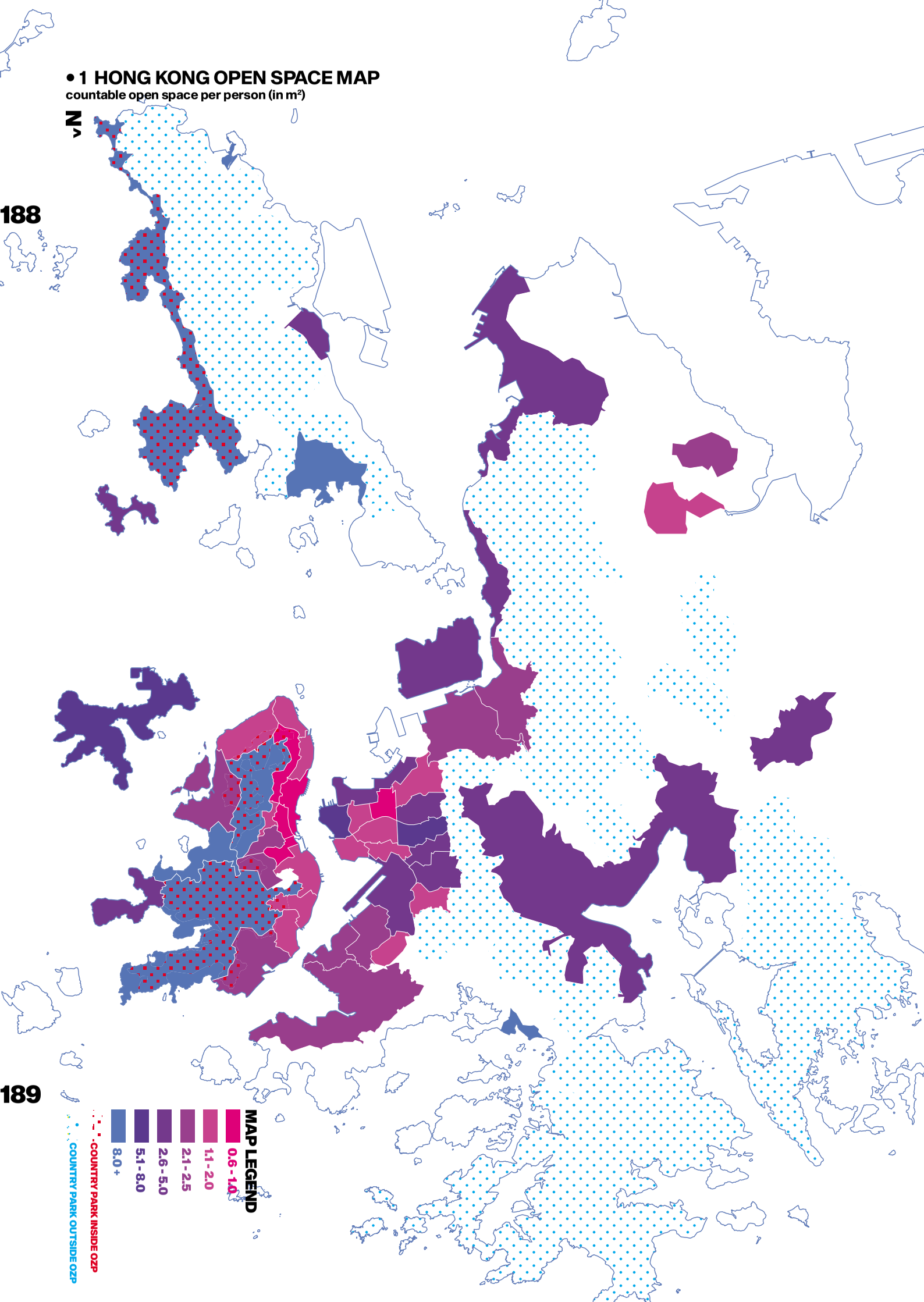
缺乏公共空間

“A public space refers to an area or place that is open and accessible to all peoples, regardless of gender, race, ethnicity, age or socio-economic level. These are public gathering spaces such as plazas, squares and parks. Connecting spaces, such as sidewalks and streets, are also public spaces. In the 21st century, some even consider the virtual spaces available through the internet as a new type of public space that develops interaction and social mixing”[12]

With this definition of public space given by UNESCO, public space is defined as any kind of area where any type of person can express themselves in freedom, we also speak of virtual public space that has taken the place of parks and squares during this quarantine. Interesting is the openness that is made in the definition of the area, no matter whether it is a square, a walkway or a park, the important thing is that it is open: this also

• 1 HONG KONG OPEN SPACE MAP

countable open space per person (in m²)



defines the halo of conquest and appropriation of a common good for a certain period of time, as if it were the people themselves to make a public space and not the space itself.

In a city as densely lived as Hong Kong, the theme of public space is of crucial importance, a city in the continuous pursuit of the maximum spatial efficiency, exploiting every single square metre available and where land prices reach astronomical figures, not selling a part of the land represents a significant economic loss. The lack of space for the community is easily evident, as it is very common to find people who take possession of public spaces almost domesticating them. In a city where buildings are relatively small by the standards to which we are commonly accustomed, it is much more evident how a place also becomes a re-proposal of a domestic space for exchange and sharing. A study conducted by Civic Exchange (independent Hong Kong public-policy think tank) shows the amount of public space in m2 per person based on the various areas of the city, from the map you can see how: in urbanized areas the square meters available for each person are really low and are around 0.6 in most cases and around 2m2 in areas adjacent to nature areas.

In the village of shopping

• HK
SAI YING PUN
11.2019

malls, where at the base of each skyscraper you can find a small gallery of shops, there are these commercial groups that try to become public space. In particular, we speak of POPS (Privately Owned Public Space) , spaces belonging to the building or part of the same property where the public space is located, however, the owners could continue to have decision-making power over access and use. (Kayden, 2000)

In Hong Kong the presence of this type of public space is widespread: thanks to the vast system of walkways that make people pass from one building to another, the new public spaces become the lobbies or galleries in this new urban network. The parks available, besides not being very many, are strongly regulated at the entrance of these areas there are more prohibitions than allowed actions, discouraging their use by the population.
It is evident that in the POPS, particularly in shopping centres, because even if they are defined as public spaces the only activity allowed is shopping. The common factor is that in most cases they try to occupy covered or shaded spaces, also for climatic reasons, being very hot and humid, with a long season of sudden rain and typhoons. This almost natural attitude to seek shelter not only for reasons of comfort, but

also for the intrinsic feeling of security is evident in the way and in the public areas occupied by citizens.

All the factors mentioned above in such a densely populated city give rise to dynamics of appropriation of urban spaces, as if there were a continuous game of risk at an urban level. Jeffrey Hou in his book, insurgent public space, finds different ways of appropriation of collective space: Appropriating, which represents actions for which ownership of public space can be temporarily or permanently suspended. Reclaming, i.e. the reuse and adaptation of abandoned urban spaces by giving them a new function, pluralizing which refers instead to ethnic groups that transform the function of a given public space and Transgressing, when the border between public and private loses relevance through temporary occupation (Jeffrey Hou2010).

One of the last studies carried out by Superstudio from 1973 to 1978 is very interesting in supporting the analysis of the use and appropriation of public space in Hong Kong.

• HK
CENTRAL
02.2019

In the last period the Florentine group studied the ancestral use of the simplest objects, self-managed transformation processes and material cultures outside the city, it was an almost encyclopedic research of tools and their use in work. The agricultural environment was studied, because it was considered as a virgin land from an anthropological point of view, in which the creative manifestation of the individual who creates his own objects is still evident, a creativity that represents a total and self-managed relationship with man, society and the environment (Mastrigli 2016).

We try to get to the roots of that factor that leads the human being to create objects useful to satisfy his needs. This kind of look between anthropology and architecture is perfectly reproposable in order to understand in the best way the self-construction of public space, in this case indigenous people or farmers are not taken into analysis but we move from a suburban space to a strongly urbanized one, where the contact with the land worked in agriculture no longer exists.

Inside the urban space even if you are submerged by objects, not self-produced, not useful to satisfy the need for appropriation

• HK
CULTURAL CENTRE TST
11.2019

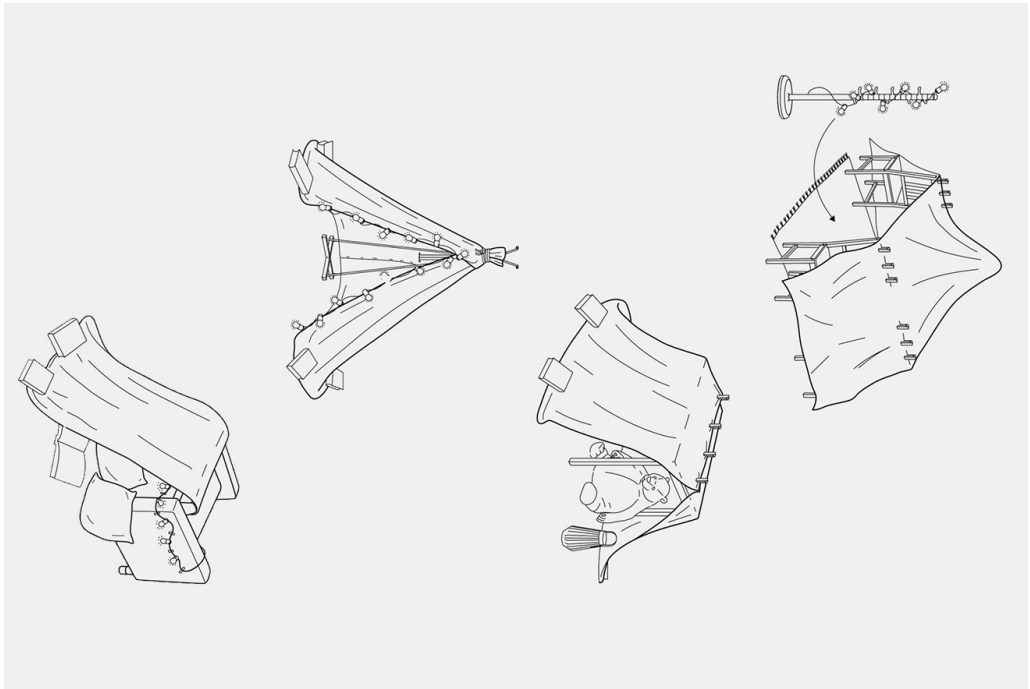
of space, you change the identity of these tools and materials using the same simple and ancestral techniques described by Superstudio, to remedy a spatial lack of the city. It is common for children to create themselves an outpost, or the much-dreamed of tree house with the objects they find around the house. Without having any particular building skills but simply assembling the objects around them and it is curious how the same practices are used by Hong Kong inhabitants to create a personal space by occupying the space of the community.

Analyzing the way in which the inhabitants occupy the public space, we found some real and proper tools that characterize these appropriative acts, particularly during the weekend, starting from central and then in several other areas of the city we find ourselves in front of a real urban guerrilla, using Jeffrey Hou's definition, in which the inhabitants try to occupy the little space available to spend their free time. Different ethnic groups occupy the space, with no need for architects, they are their own architects, they create urban spaces and living rooms by changing the use of the place they are occupying.

Umbrellas: umbrellas in Hong Kong have a special meaning,

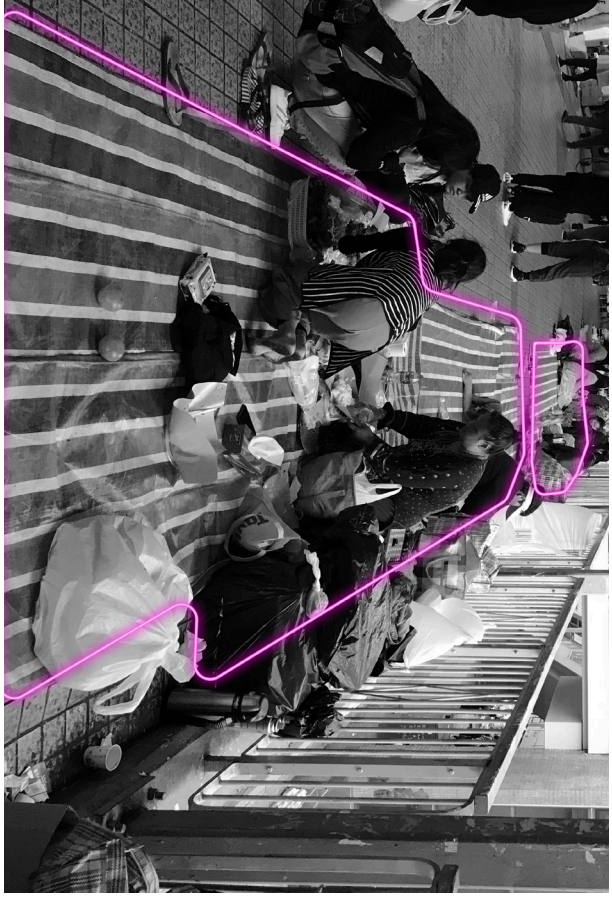
• HK
IKEA, CAUSEWAY BAY
11.2019

• 2 PROJECT ZENO, SUPERSTUDIO, 1978 (left)
• 3 IKEA FORTS FOR CHILDREN, 2020 (right)

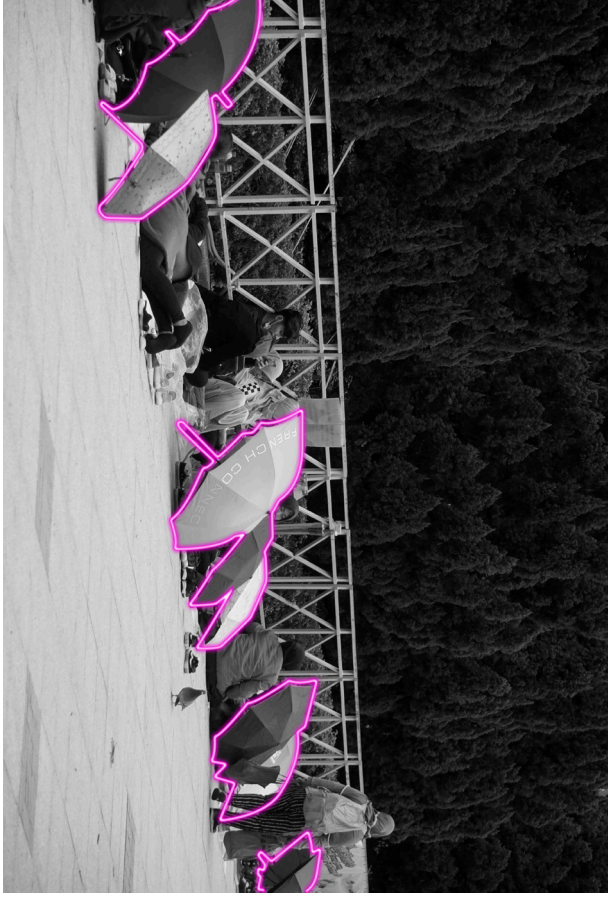


• SELF-CONSTRUCTION AND APPROPRIATION OF PUBLIC SPACE
HONG KONG, CAUSEWAY BAY
12.2019

202



• SHEETS



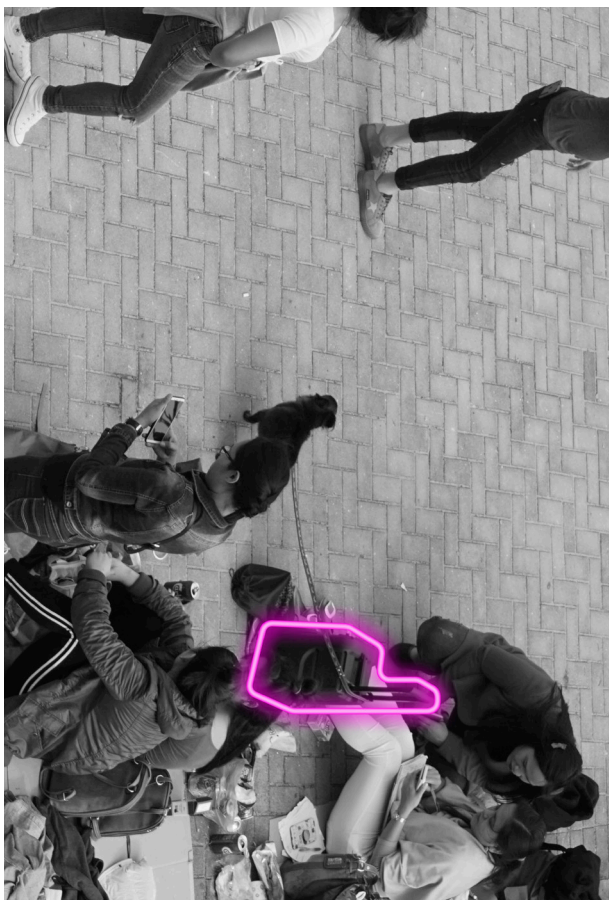
• UMBRELLAS

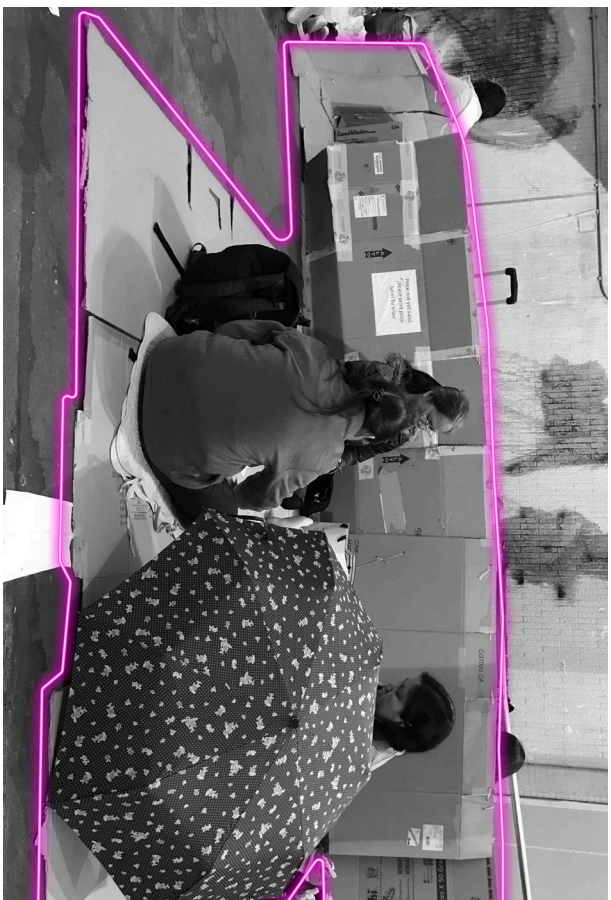
• TOOLS TO CONQUER PUBLIC SPACE

• SPEAKERS

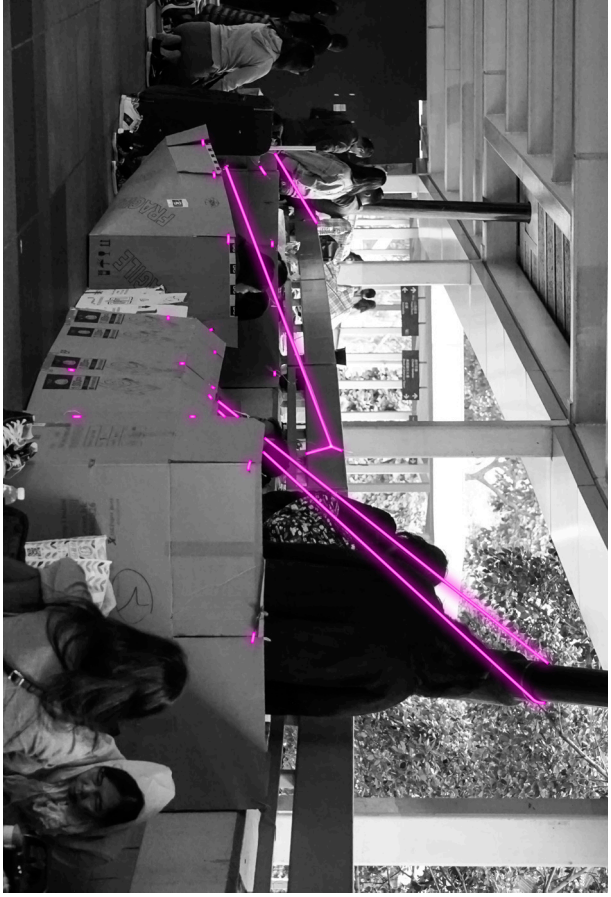
• CARDBOARD

203





• TENTS

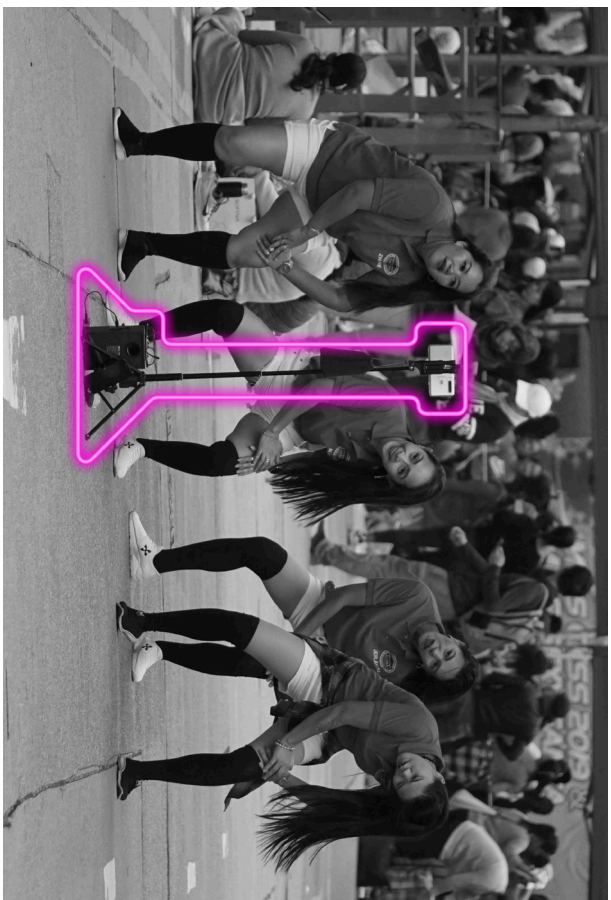


• ROPES

• TOOLS TO CONQUER PUBLIC SPACE

• LUGGAGES

• PHONES AND SELFIE STICKS



because they have been and they still are also a symbol of revolution. Also used to defend themselves in clashes with the police or to build barricades, in the conquest for public space they become a constructive element that delimits the space between what becomes private at that moment and the part that remains public.

Cardboard: the cardboard that is often collected by older people, becomes one of the privileged materials for the self-construction of public space. Citizens create real structures, with real dividing “walls” by making a pseudo-domestic living room, with the help of other elements such as wires, are joined together in ways similar to those analyzed by Superstudio, creating structures that can be opened and transported.

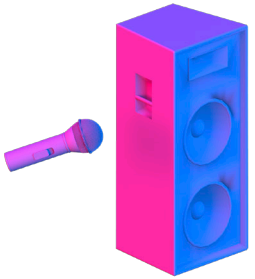
Canvases: they are mainly used in two ways, either resting on the ground becoming a surface on which to develop their activity, or they become covers in a homemade version of a tensile structure with the help of small ropes.

Speakers : very interesting is the delineation of a space through sound, the use of microphones or speakers delimit a certain area that is not well defined, but consists on the area beyond

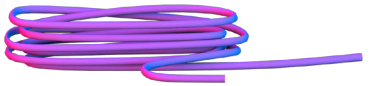
UMBRELLAS

CARDBOARD

SHEETS



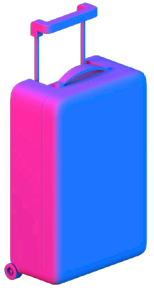
SPEAKERS



ROPES

PHONES AND SELFIE STICKS

TENTS



LUGGAGES

which the sound produced does not cause disturbance to other people. The presence of these instruments is very widespread, whose primary objective is to entertain, bringing people to practice for real singing or dancing shows, useful only for personal entertainment. To a more attentive eye, however, it is clear that these elements are also relevant to the determination of these spaces becoming an instrument of occupation of public space.

The ropes: Ropes are mainly used together with many other elements of the abacus, they are used to help in the construction of structures and refer to the analysis of extra-urban practices on the creation of objects.

Selfie stick: Capturing a certain moment becomes important, any moment should be photographed and/or filmed and then shared on social networks. The tools used for these shots are often also professional, used to shoot their own performances or to make video calls. In this case the space occupied is not only that of the object, but also the space between the device and the person, the group of people or the framed subject.

Tent: one of the most curious elements, even if commonly used to sleep in wild places far from the

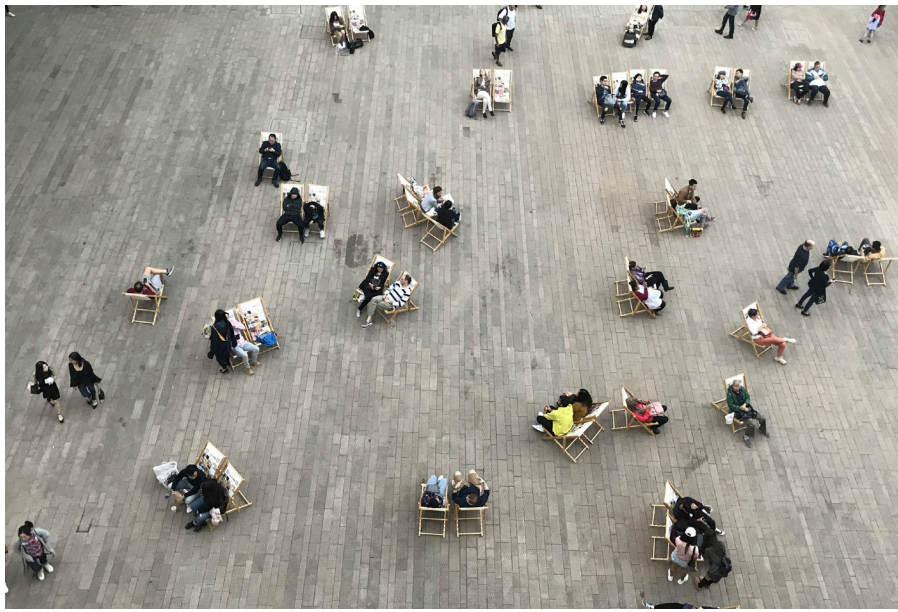
• UNDER THE FLYOVER
CAUSEWAY BAY
01.2020

city, in this case tents are used in urban space: parks, streets or bridges. The construction of the space is given by the instructions to set up the tent, the individual creativity is lost.

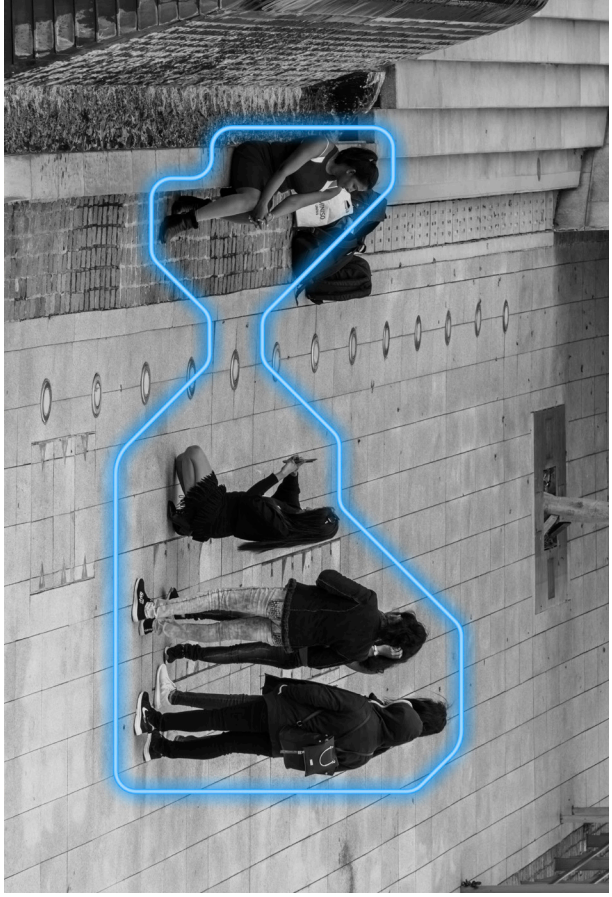
Suitcase: this element not only carries all the objects described above, useful for the occupation of space, but also has the task of delimiting an area. The position of the suitcase can delimit an area and at the same time become a table for eating or support. In the analysis of the occupation of public space (in addition to the “global tools” analyzed above), it is interesting to analyze the activities with which the public space is occupied.

In this case, we focus on all those activities carried out in a given space, where the area used for a given time is defined not only by objects but by bodies and their movement. In this case, we are face with a natural phenomenon of appropriation of public land, as these actions take place in areas initially designed for other purposes, which become neutral surfaces that people use to remedy a lack of more suitable spaces.

This kind of analysis was carried out by walking and photographing people while they delimited the public space with their activities, making those areas become private spaces for a certain period.



• SPONTANEOUS SOCIAL DISTANCE
TAI KWUN - CENTRE FOR HERITAGE AND ARTS
11.2019



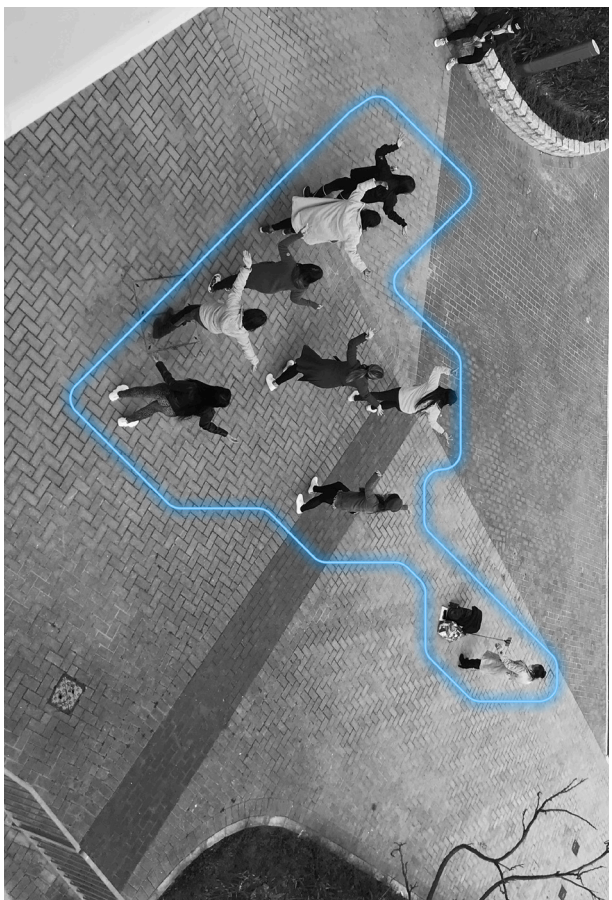
• PHOTO SHOOT

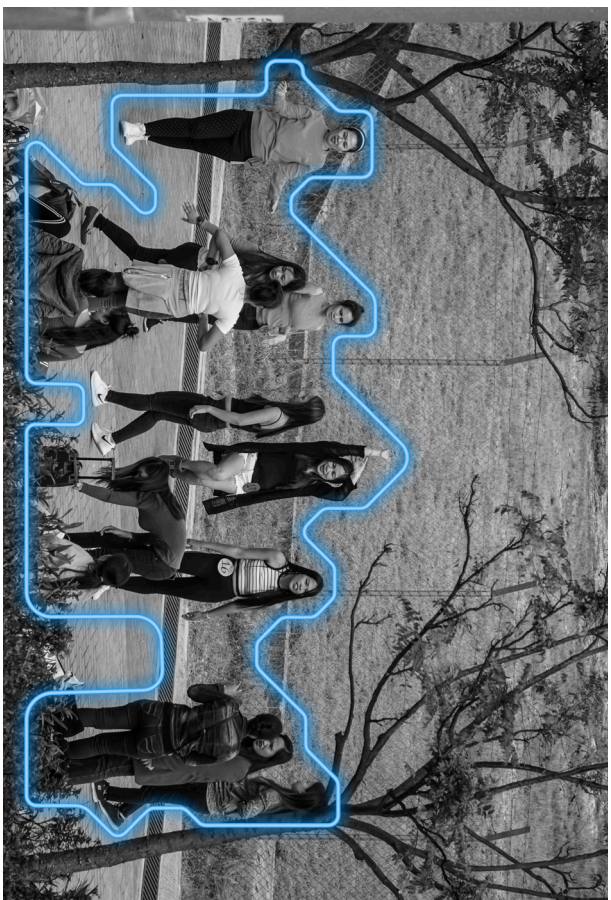
• DANCE CREW

• ACTIVITIES

• DANCE CREW

• DANCE CREW





214

• HANG OUT

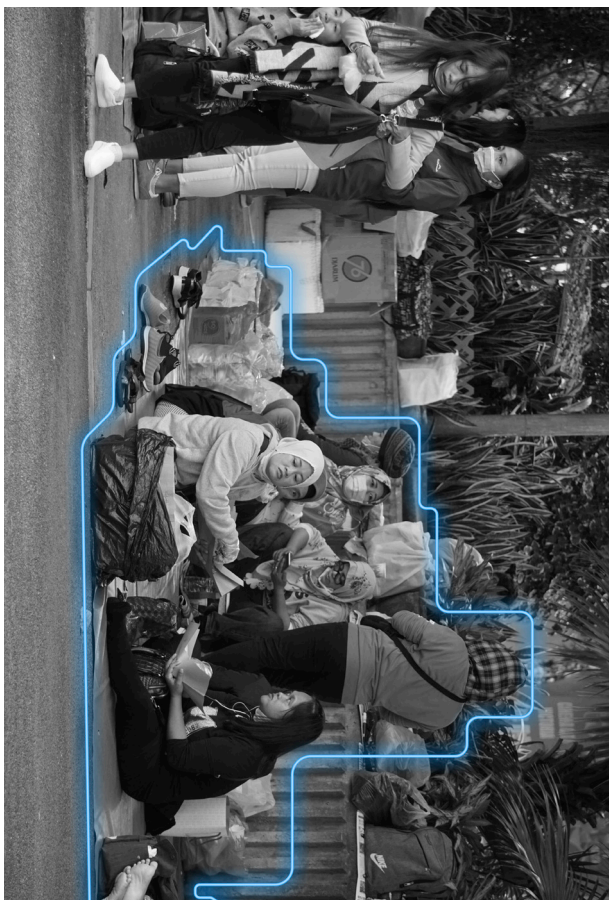
• HANG OUT

• ACTIVITIES

• HANG OUT

• HANG OUT

215



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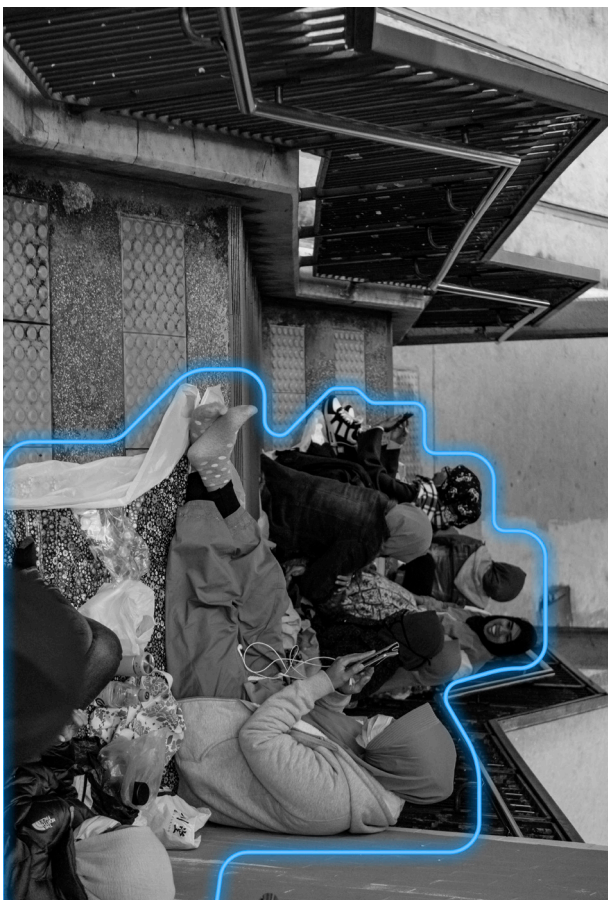
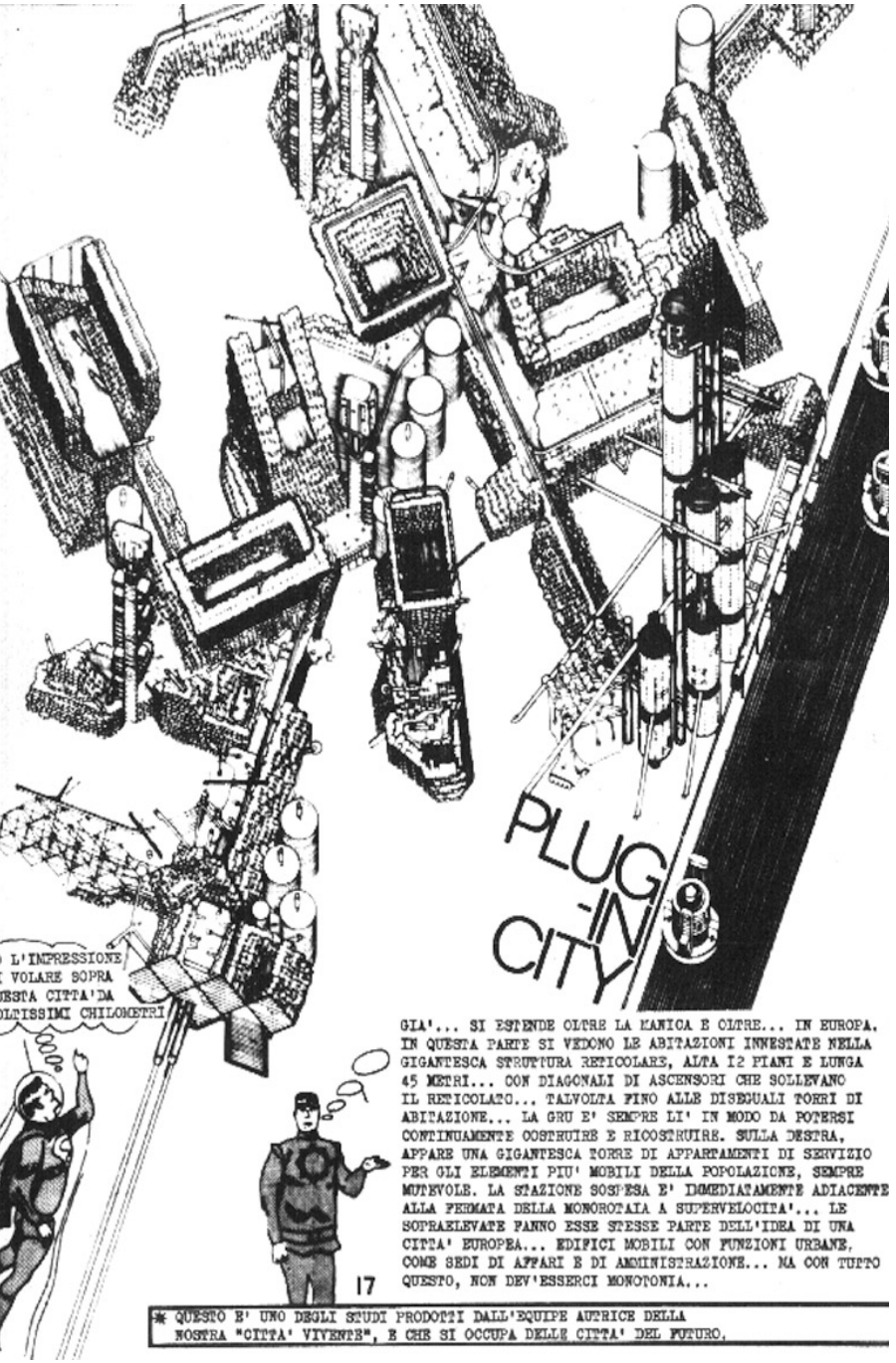




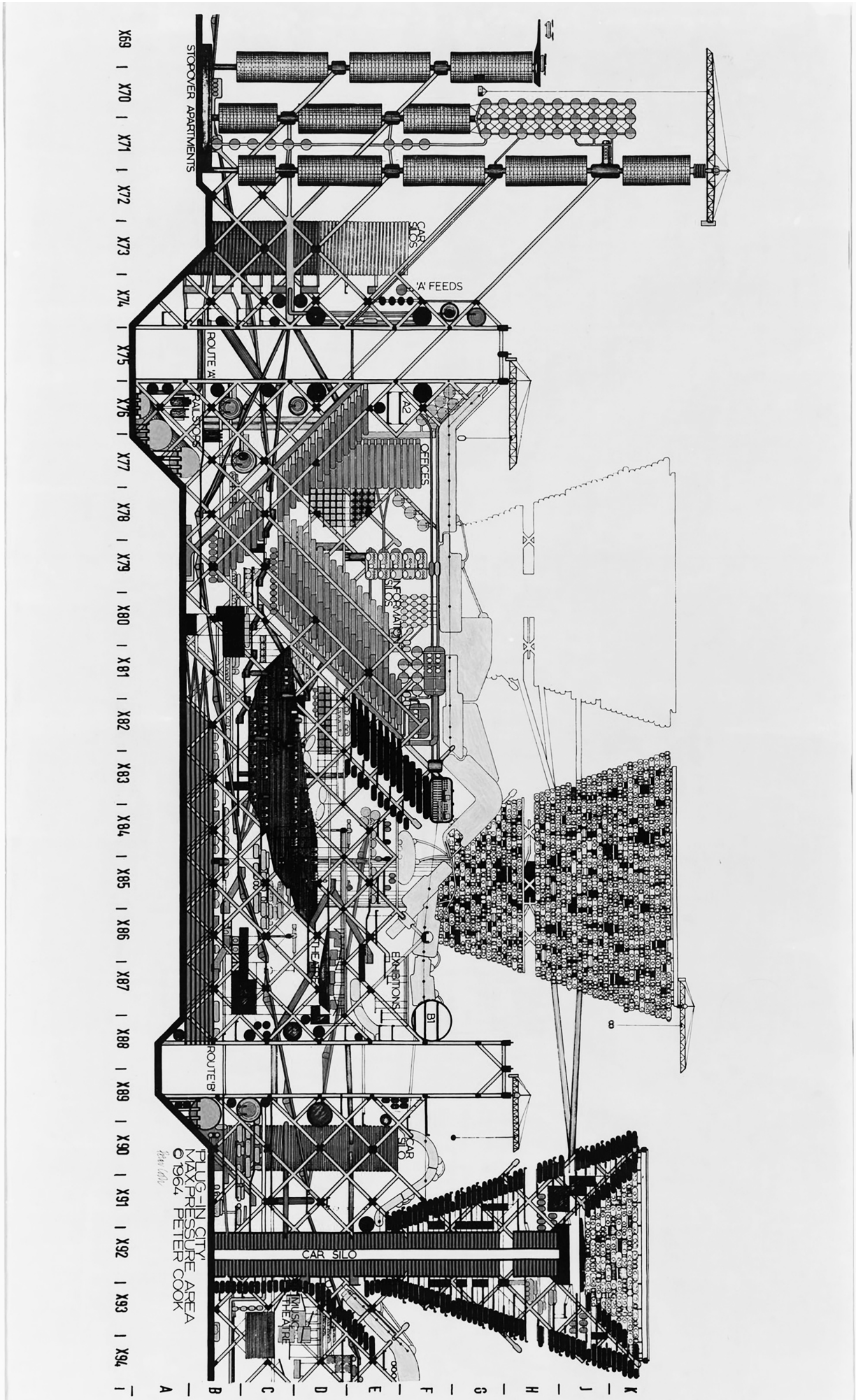
• 1 PLUG-IN-CITY, PETER COOK, 1964

MEGASTRUCTURES

超級建築

“Megastructure, the concept of a giant, adaptable, multi-purpose building... containing most of the functions of a city, was one of the dominant design themes of the late 1950s and most of the 1960s, occupying the difficult middle ground between architecture and town planning. Vast, it offered architects the chance to create super-monuments on a scale matching the modern city; adaptable, it offered the citizenry the possibility of creating their small-scale environments within the enormous frame. Yet despite these promises, architects and citizens alike had abandoned the idea and sought more modest solutions to their needs - and ambitions.”[13]

• 2 PLUG-IN CITY: MAXIMUM PRESSURE AREA, PROJECT, PETER COOK, 1964

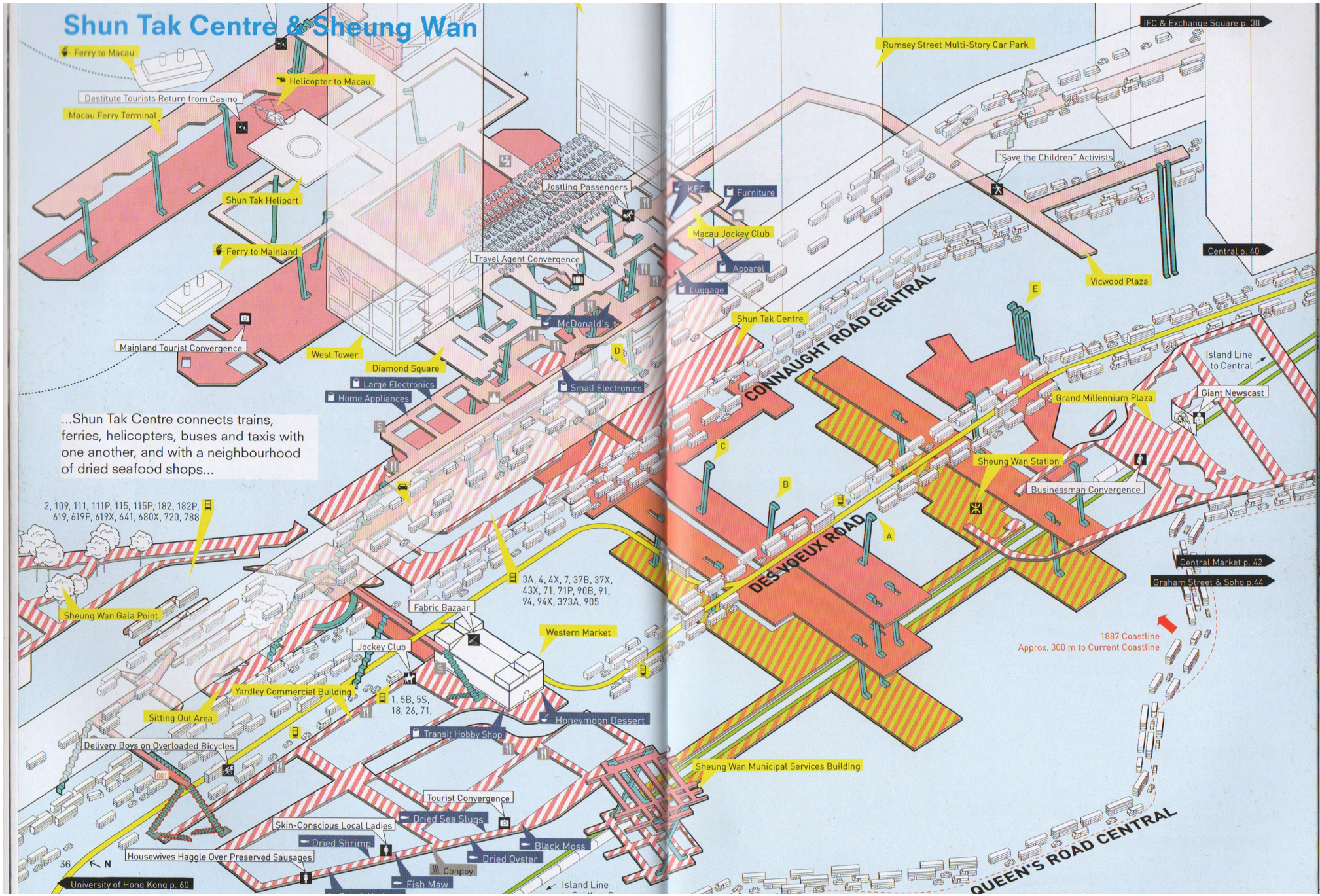


The megastructures wew born as visions of the city of the future or rather of the city seen as a single building, able to accommodate the multitude of functions and dynamics of urban space.

Many architects tried their hand at the design of these Futuristic City Buildings: starting from the thrust of the skyscraper typology's appearance on the American scene up to the whole movement between the 50s and 60s, where the idea that the future of architecture would be the megastructure developed with different facets in different parts of the world. With the japanese Metabolists or with the european avant-garde such as Archigram, Archizoom or Superstudio, the mega form saw its appearance on the scene, but apart from sporadic examples made on a small scale, or during the beautiful universal exhibitions in Montreal in 1967 and Osaka 1970, there were not many concrete works.

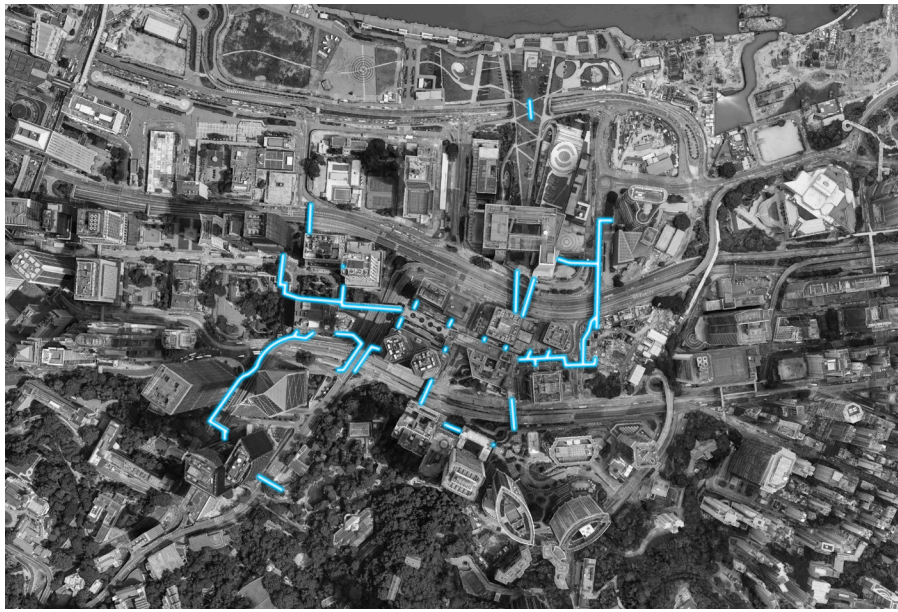
Although these "utopian" visions were abandoned, they influenced and inspired all future generations, fascinated by this vision of a better, shared, and hyper-communitarian future.
In recent years, there is a growing need to rethink urban space and to study the projects and thoughts of that prosperous period, perhaps due to the continuous growth of the cities, of the number of inhabitants, an increasing need to rethink urban space is bringing back to the surface all the solutions developed after World War II.Most of these mega-structures were designed, in the sense that no account was taken of the space where they were placed (also because they were often the ones to move), the huge building was designed or at least conceived from scratch, a vision that is different from what is happening in some densely and intensely inhabited cities, such as Hong Kong.

The concept of megastructure that developed in Asia's World City was not born from the planning of the entire building envelope, but from the connection of existing volumes, allowing all people to cross buildings and move freely through complex systems of bridges and connections.
Adam Frampton in his book Cities Without Ground, studies in a very deep and interesting way these immense complexes of buildings that are created, in particular at the almost complete detachment from the ground: "... Hong Kong exhibits neither objects nor a field, but a mass composed of tightly packed, continually ramifying figures. These figures connect in three dimensions, creating the impression of the city as a continuous, urban-scaled interior."[14]

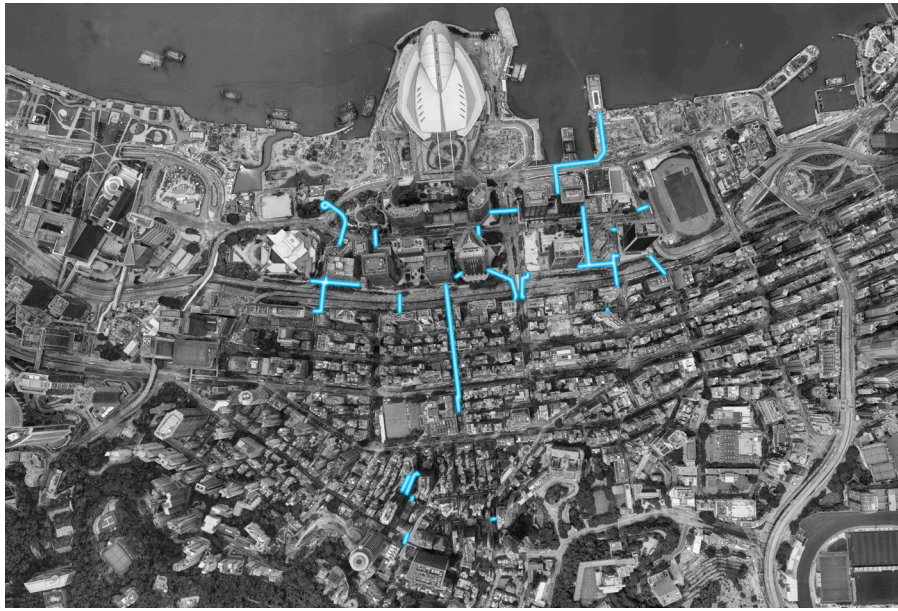

Shun Tak Centre & Sheung Wan
...Shun Tak Centre connects trains, ferries, helicopters, buses and taxis with one another, and with a neighbourhood of dried seafood shops...
Ferry to Macau
Helicopter to Macau
Destitute Tourists Return from Casino
Macau Ferry Terminal
Shun Tak Heliport
Ferry to Mainland
Mainland Tourist Convergence
West Tower
Diamond Square
Large Electronics
Home Appliances
Jostling Passengers
Travel Agent Convergence
McDonald's
Small Electronics
2, 109, 111, 111P, 115, 115P, 182, 182P, 619, 619P, 619X, 641, 680X, 720, 788
Sheung Wan Gala Point
3A, 4, 4X, 7, 37B, 37X, 43X, 71, 71P, 90B, 91, 94, 94X, 373A, 905
Fabric Bazaar
Western Market
Jockey Club
Yardley Commercial Building
1, 5B, 5S, 18, 26, 71,
Sitting Out Area
Honeymoon Dessert
Transit Hobby Shop
Delivery Boys on Overloaded Bicycles
Sheung Wan Municipal Services Building
Tourist Convergence
Dried Sea Slugs
Skin-Conscious Local Ladies
Dried Shrimp
Black Moss
Housewives Haggle Over Preserved Sausages
Dried Oyster
Conpoy
Fish Maw
36
N
University of Hong Kong p. 60
Island Line
Rumsey Street Multi-Story Car Park
IFC & Exchange Square p. 38
"Save the Children" Activists
KFC
Furniture
Macau Jockey Club
Apparel
Luggage
Central p. 40
Vicwood Plaza
Shun Tak Centre
CONNAUGHT ROAD CENTRAL
Island Line to Central
Giant Newscast
Grand Millennium Plaza
Sheung Wan Station
Businessman Convergence
DES VOEUX ROAD
Central Market p. 42
Graham Street & Soho p.44
1887 Coastline
Approx. 300 m to Current Coastline
QUEEN'S ROAD CENTRAL

The creation of these areas did not all take place at the same time but it is the result of a continuous process of designing new connections, in the name of maximum efficiency. Important to understand how the visions of the middle of the last century were partly premonitory of a phenomenon that is now happening in different ways.

• 4 BRIDGES IN CENTRAL, AERIAL VIEW



• 5 BRIDGES IN ADMIRALTY, AERIAL VIEW



• 6 BRIDGES IN WAN CHAI, AERIAL VIEW

CENTRAL

中環

WALKABLE DISTANCE

3.48 km

N. OF BRIDGES

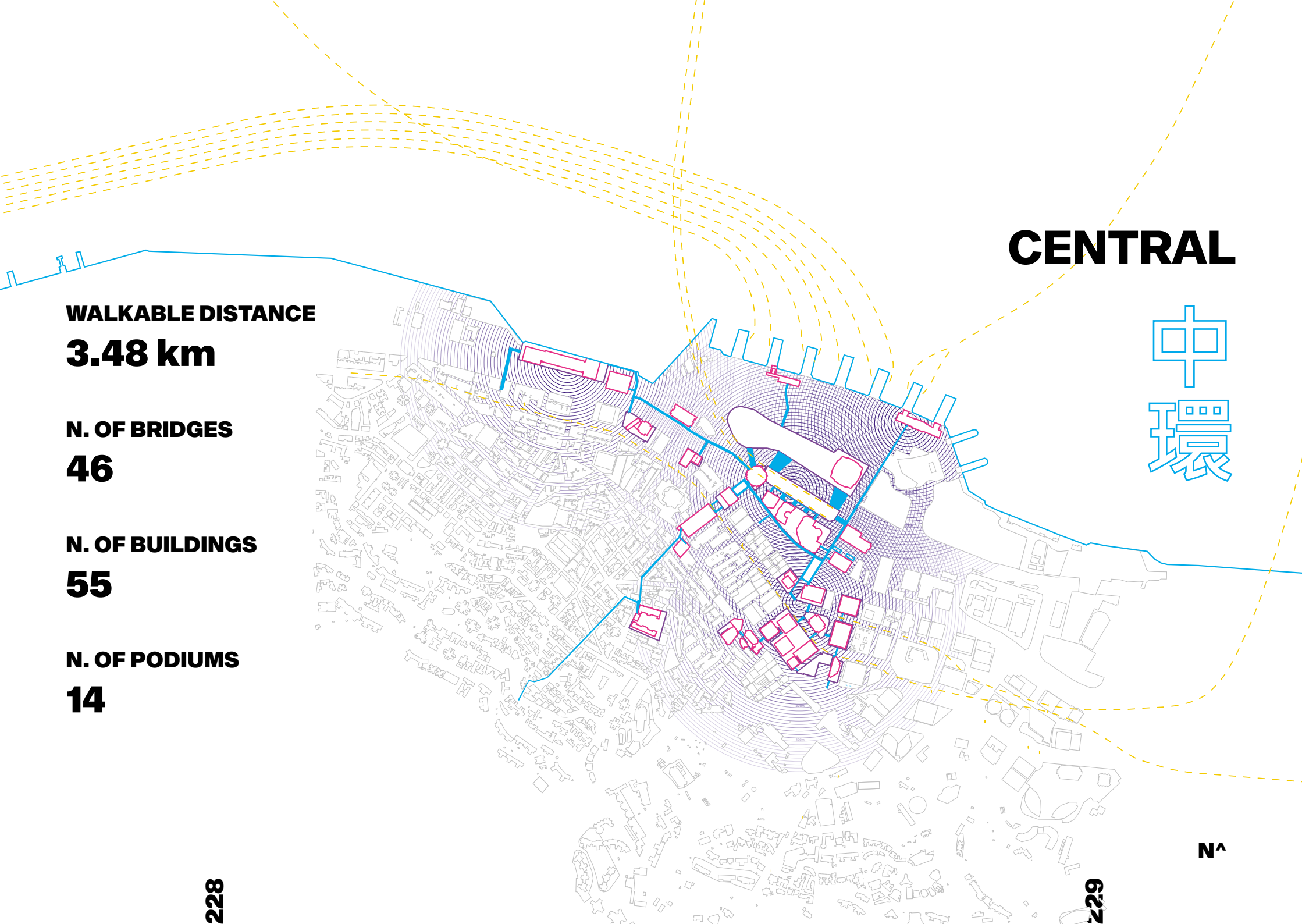
46

N. OF BUILDINGS

55

N. OF PODIUMS

14

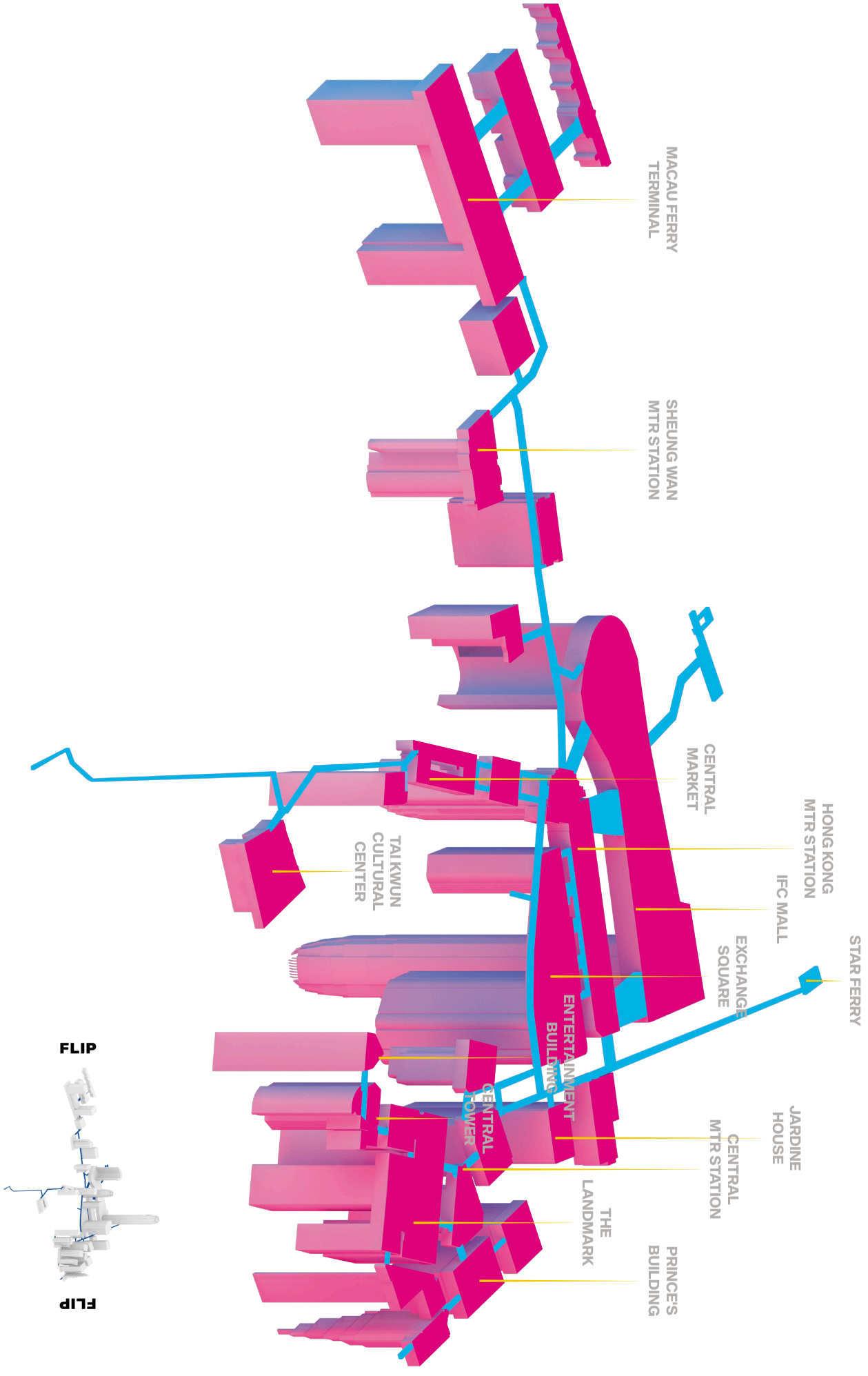


N^

228

229

• 3D OF THE ENTIRE MEGASTRUCTURE IN CENTRAL

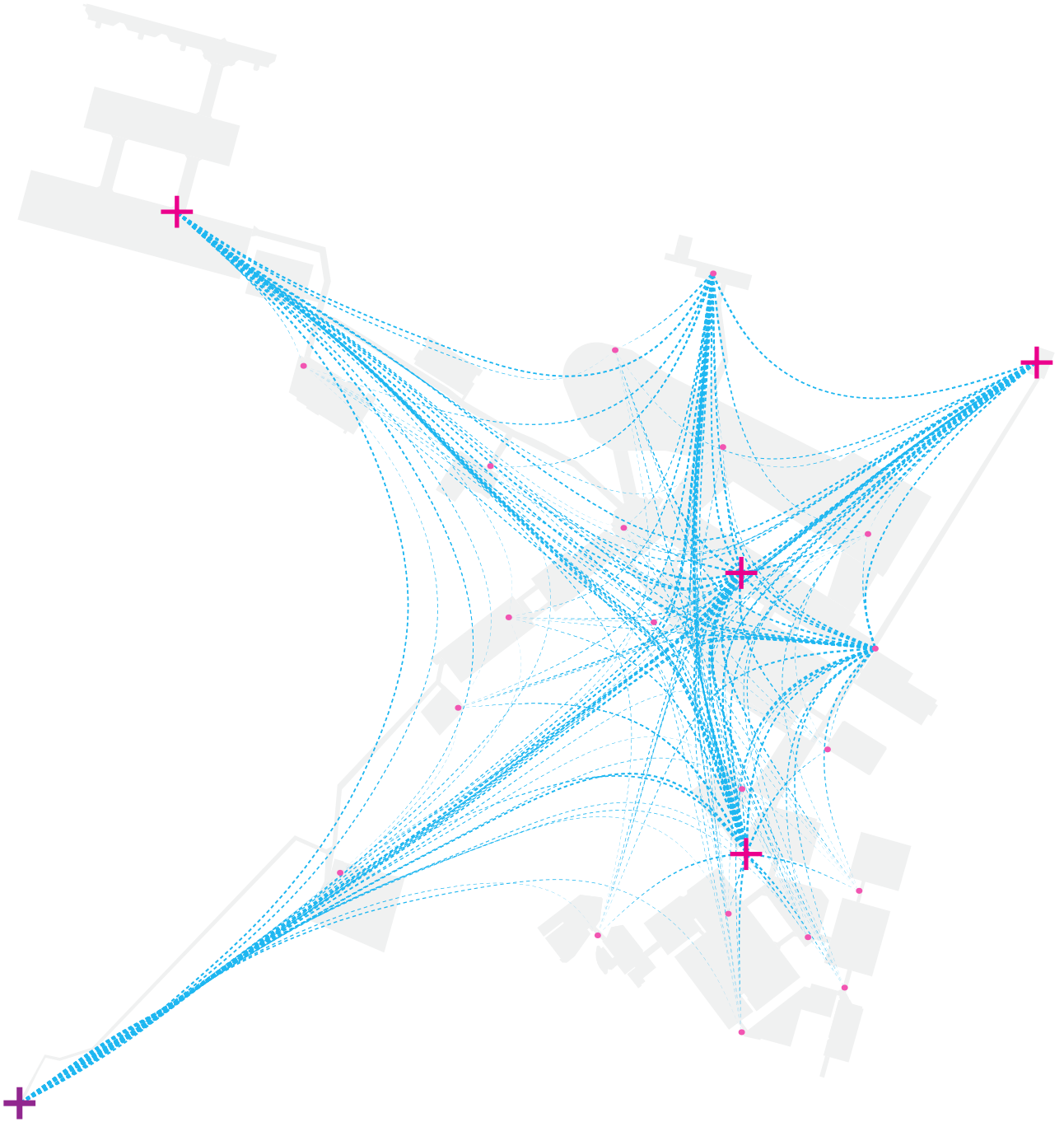


Its geographical location and its continuous development has led this area to become one of the various centers of the city, it was one of the first settlements to be developed, it is a commercial and financial center, an important transport hub and one of the hubs of Hong Kong nightlife.

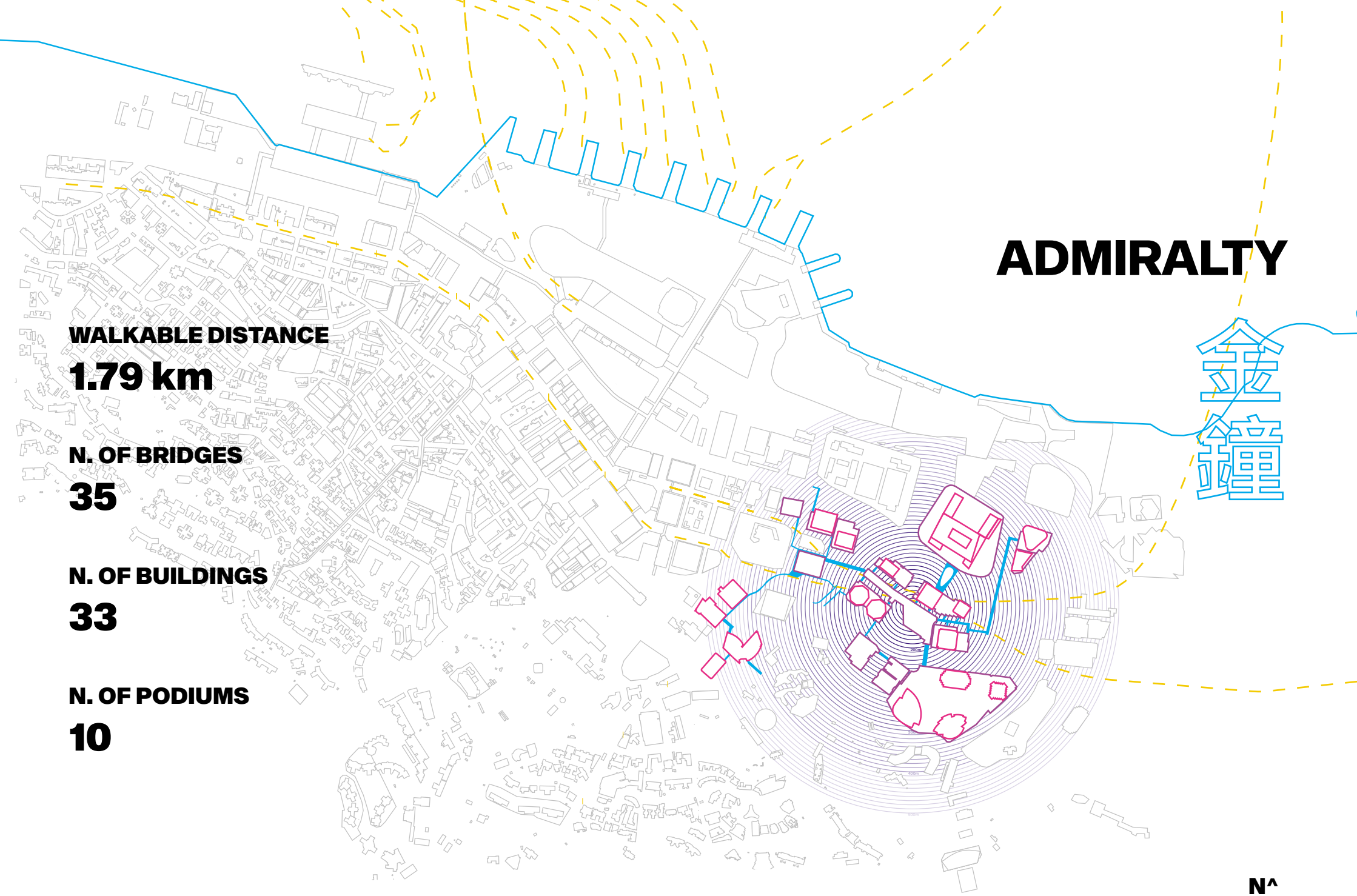
Central is home to some of the city's most iconic buildings, as well as recent developments in building heritage such as the Tai Kwun center, the PMQ, or the new Central Market still undergoing reconstruction.

Starting from a flat development overlooking the Bay, it climbs up Hong Kong's mountain to almost the peak, with its endless towers soaring to the sky.

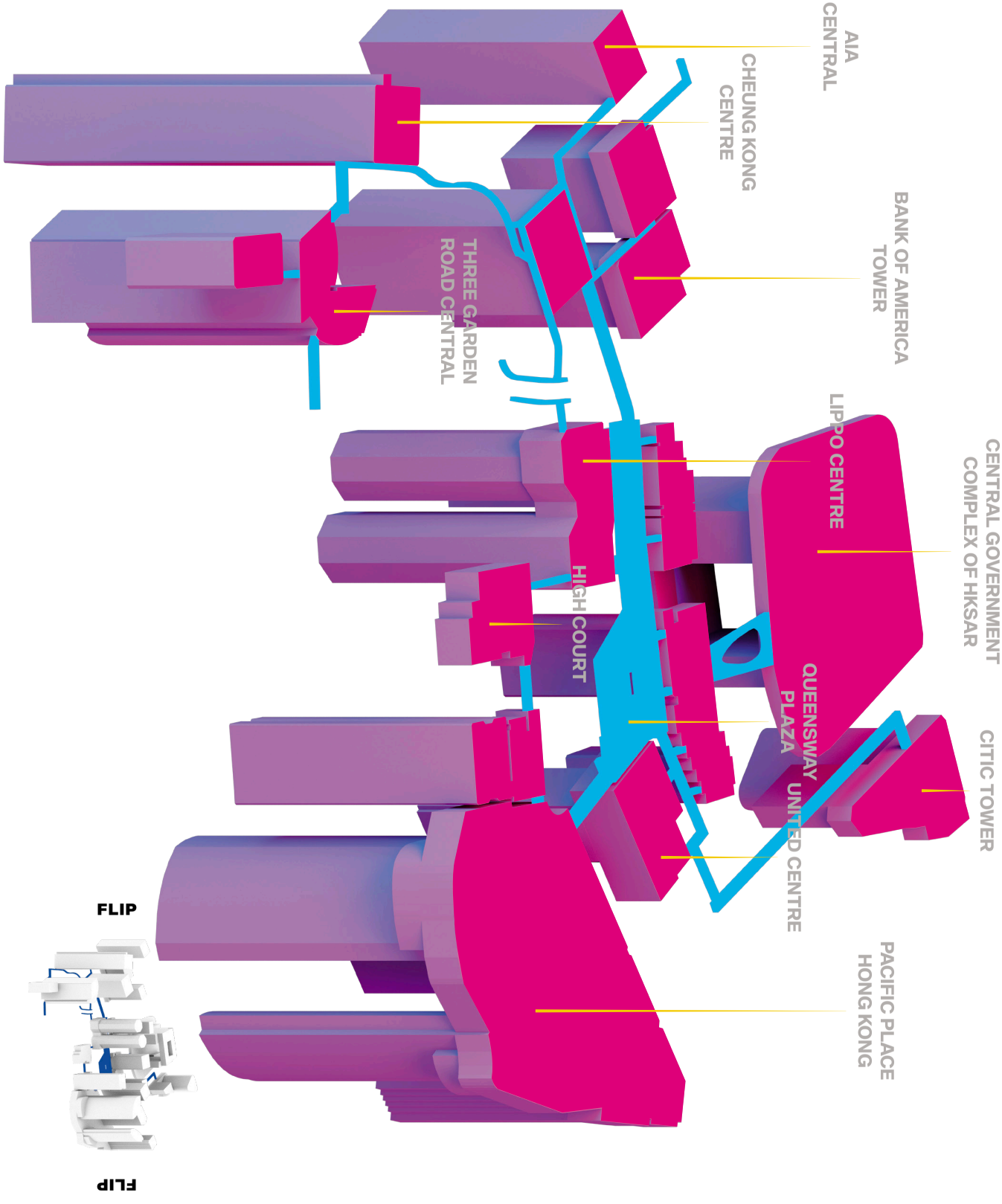
One of the most important elements is its megastructure, in fact, as demonstrated in previous analyses, the connections between the buildings create a continuous system that covers the district in its almost totality.



• REPRESENTATION OF THE MOST FREQUENTLY USED ROUTES WITHIN THE MEGASTRUCTURE


ADMIRALTY
金鐘
WALKABLE DISTANCE
1.79 km
N. OF BRIDGES
35
N. OF BUILDINGS
33
N. OF PODIUMS
10
N^

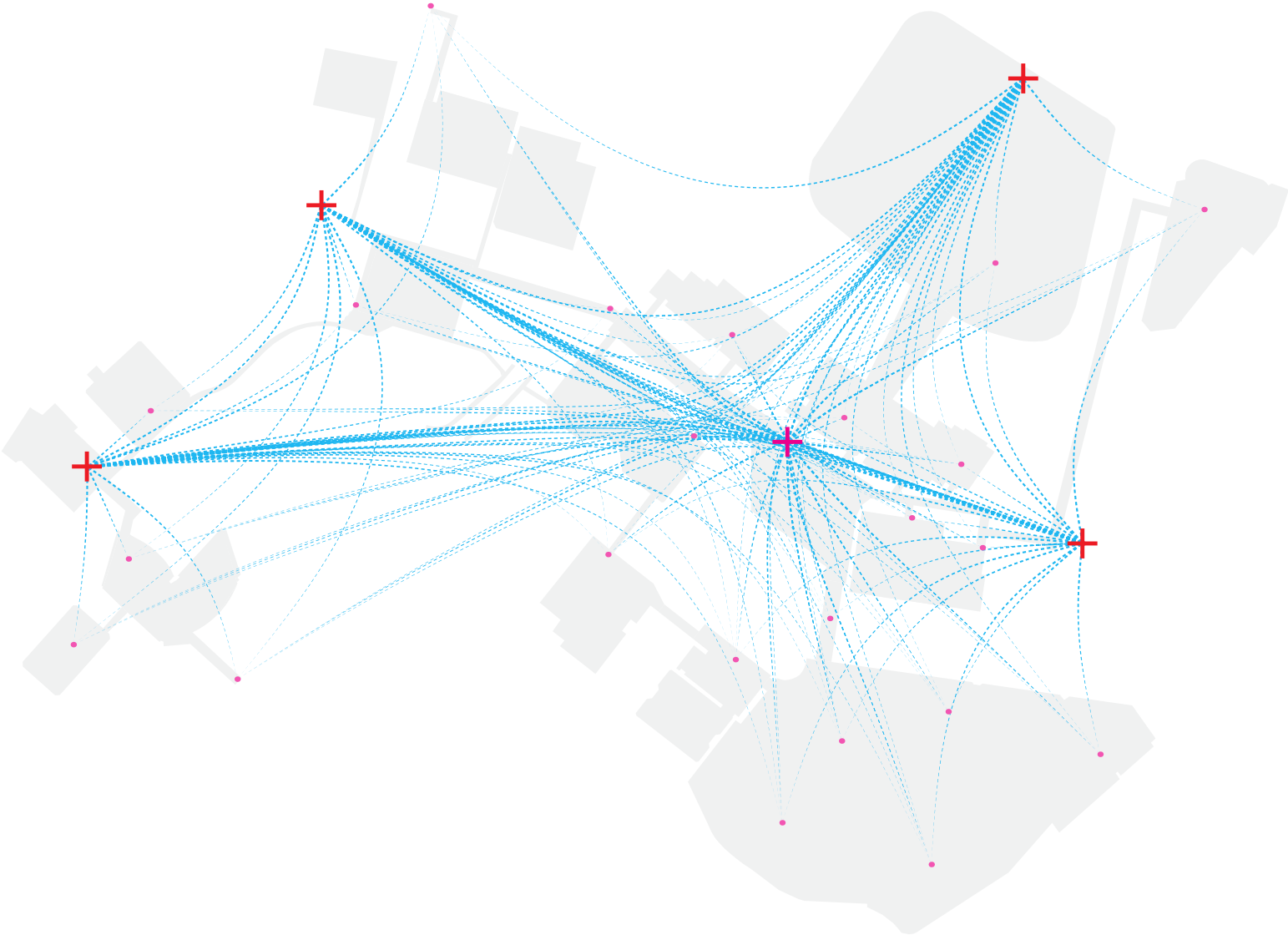
• 3D OF THE ENTIRE MEGASTRUCTURE
IN ADMIRALTY



Admiralty is always part of the Central & Western District, originally it was a British military base that divided the two areas of the island, from the middle of the 20th century the area returned to the city with the construction of the MTR.

Today it is an important financial center, most of the buildings are offices and government buildings, and also a considerable number of hotels and commercial areas can be found in this district.

In this case, the mega-structure of Admiralty is smaller than the others analyzed, it is interesting how one of the links becomes an elevated shopping center, a hybrid between building and bridge.



• REPRESENTATION OF THE MOST FREQUENTLY USED ROUTES WITHIN THE MEGASTRUCTURE

WAN CHAI

灣仔

WALKABLE DISTANCE

2.24 km

N. OF BRIDGES

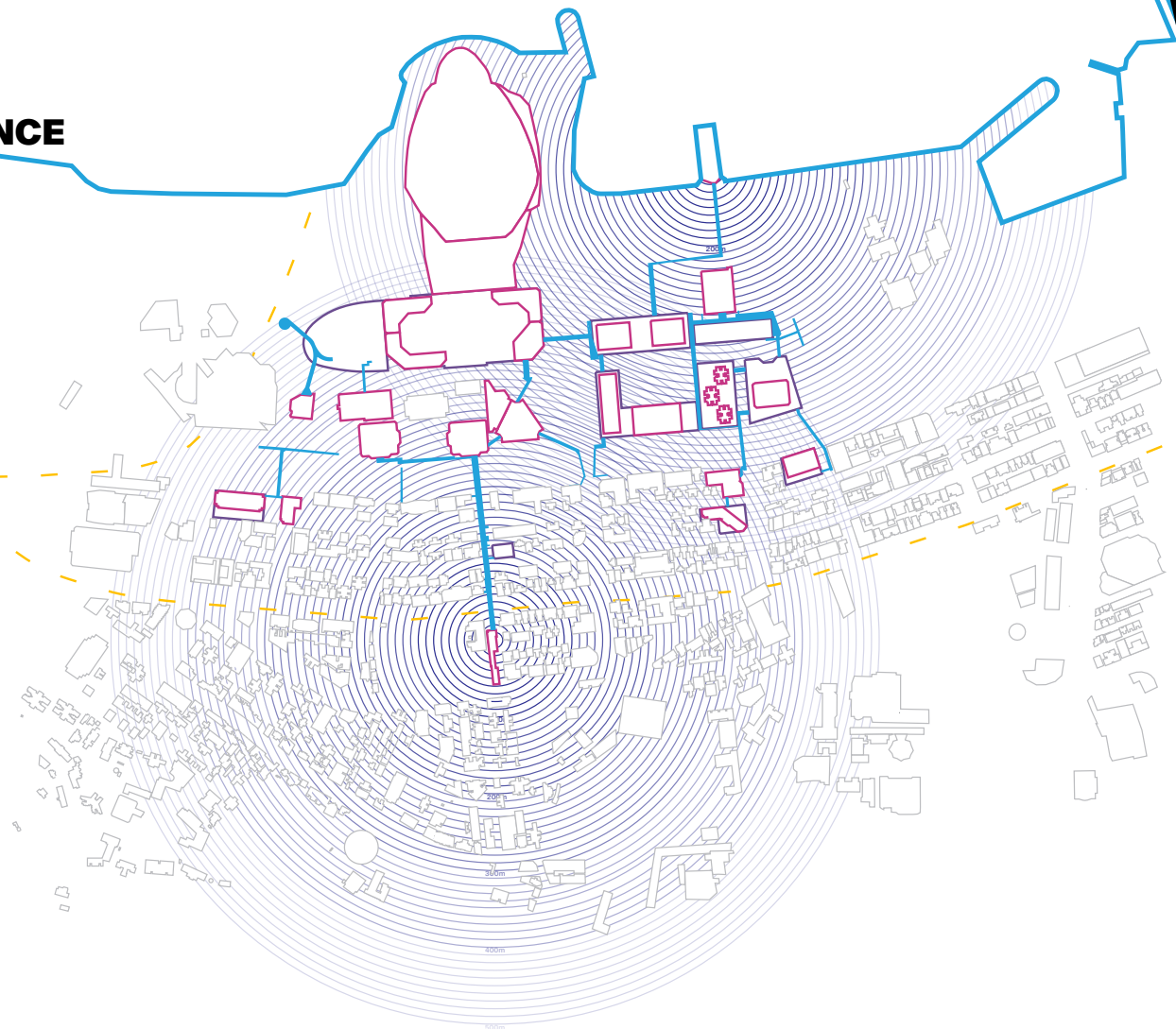
29

N. OF BUILDINGS

35

N. OF PODIUMS

9



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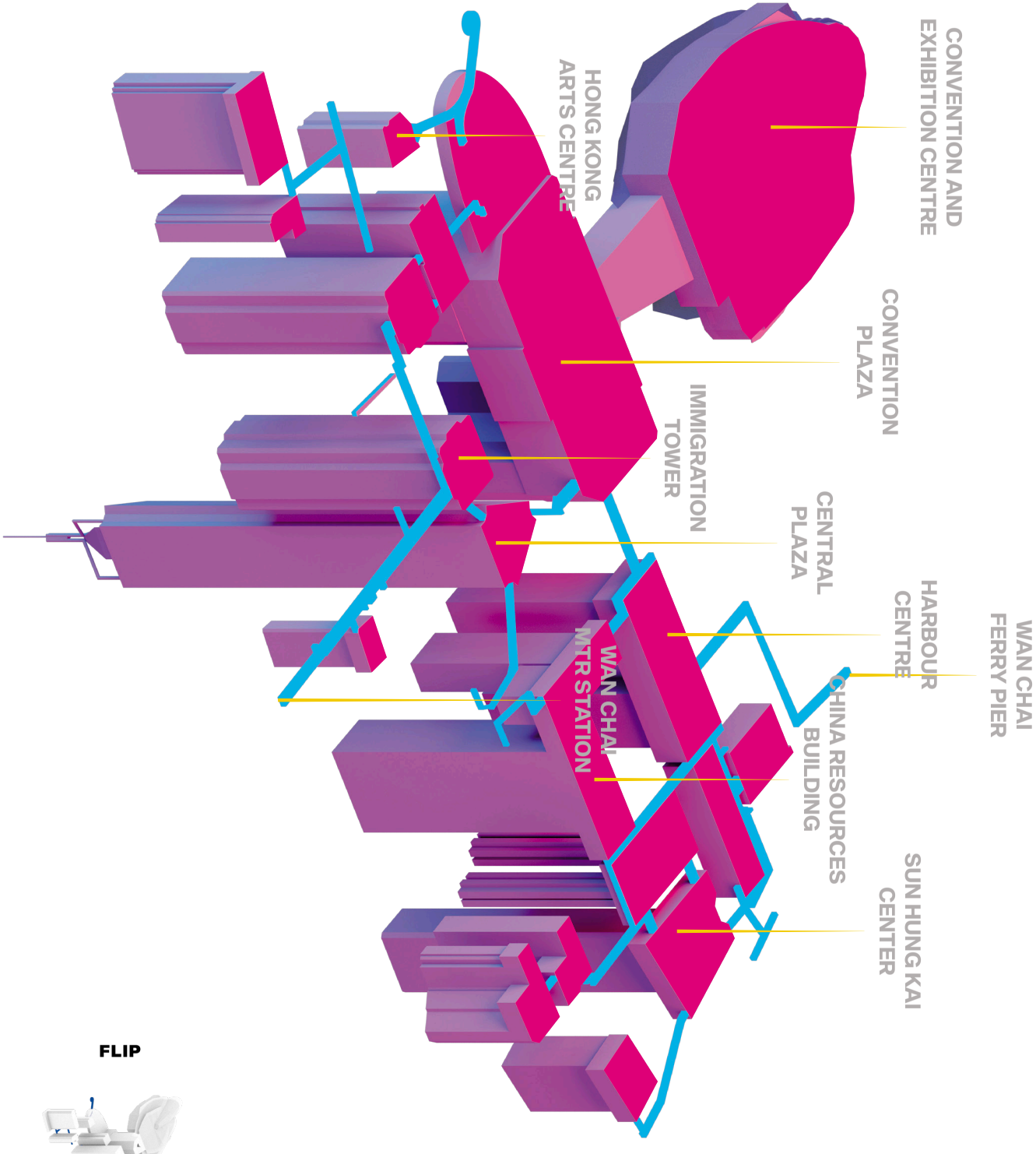
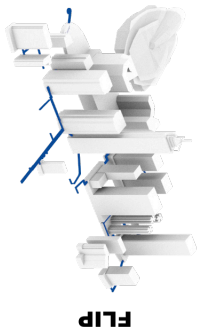
• 3D OF THE ENTIRE MEGASTRUCTURE IN WAN CHAI



FLIP

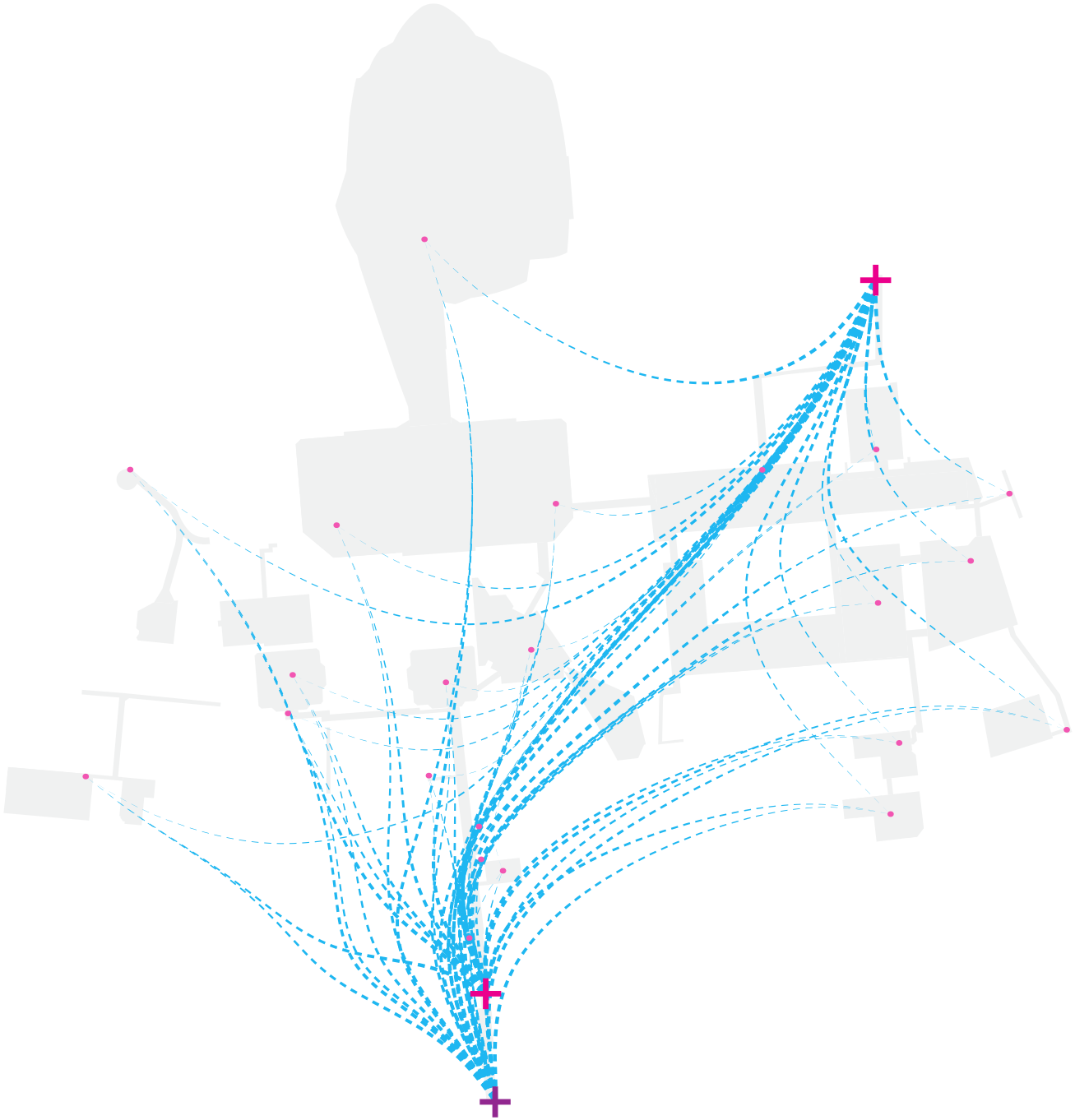


FLIP

Wan chai is one of the oldest districts, like many other areas of the city it was born as a fishing village and now has turned into one of the beating hearts of the city.

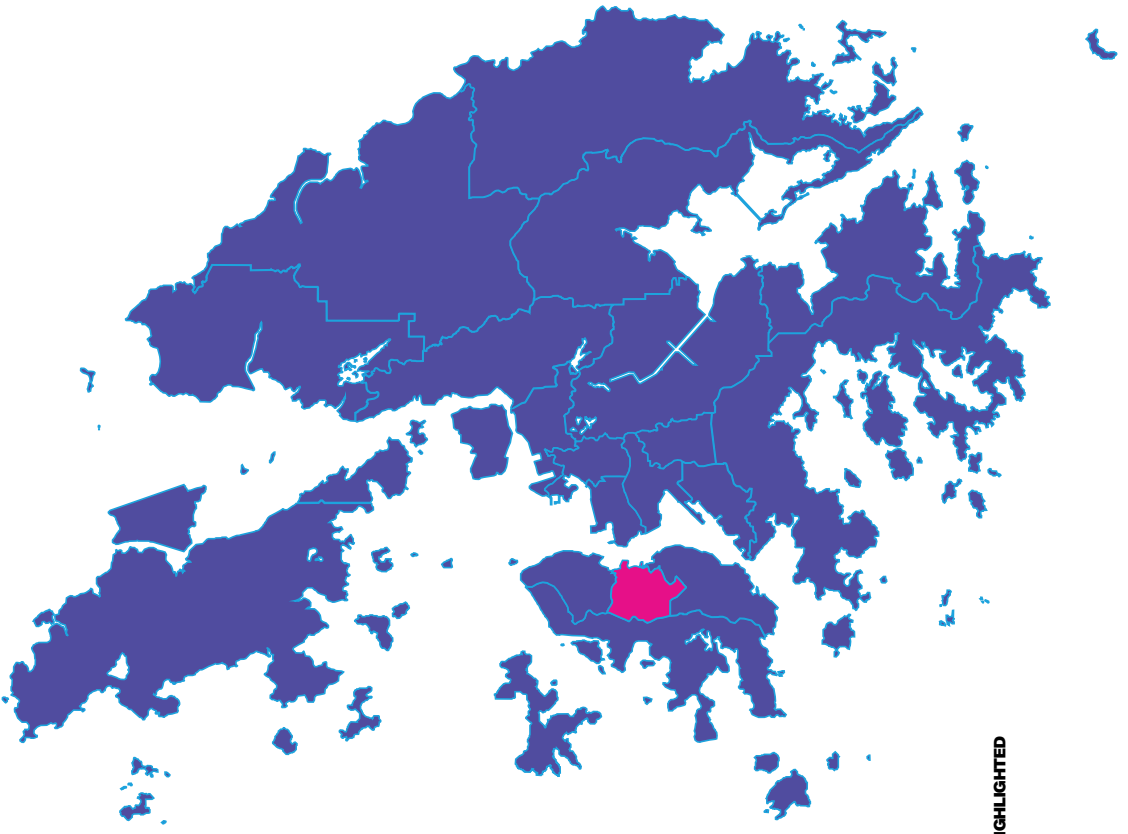
One of the most crowded areas of the megalopolis, it has different types of buildings inside, from the most governmental, administrative, and financial ones located in the north, to the most residential and commercial areas in the south.

The megastructure that is created, links the two different areas, in addition, connects the two extreme points of the system of bridges and building, from a high point the station of the MTR Wan chai, to the opposite point the station of the star ferry, which are the points of greatest influx of people to the district.



• REPRESENTATION OF THE MOST FREQUENTLY USED ROUTES WITHIN THE MEGASTRUCTURE


THE VISION
遠景



• HONG KONG DISTRICTS,
WITH THE WAN CHAI DISTRICT HIGHLIGHTED

THE DISTRICT

區域

The city of Hong Kong is divided into 18 districts established in 1982 when the city was still under British rule.
It is not only a geographical division but also an administrative one, their institution aims to achieve greater effectiveness in the coordination of government activities such as the coordination and provision of goods and services, to put to the government the needs of individual districts and increase public activity in district affairs.

Each district has a District Officer, who represents the HKSAR government at the district level, the Home Affairs Department responsible for the district administration scheme. In each area, there is also a District Councils that plays a crucial advisory role on district issues. In a cosmopolitan, multi-ethnic city like Hong Kong, there is a functional, and social characterization in each district.

Among the three different areas analyzed previously, the Wan Chai area has been chosen, because in comparison with the other two megastructures (Admiralty and Central) it is the one with the least developed megastructure.

Wan chai is located in the middle of the north coast of the island of Hong Kong, on one side overlooking the Bay of Victory, and on the opposite side, we find the mountain range on which part of the district climbs with its buildings. In addition to the design motivation, we opted for Wan Chai, because it is a district made of strong contrasts where old and new, high-rise buildings and small houses, speed and slowness, the day when about 600,000 people flock to the district for business or pleasure and the night when neon and pubs come to life, all opposing elements that coexist in perfect synergy.

It is one of the oldest neighborhoods in Hong Kong, which began as a small fishing village and over time has become a multi-faceted district, increasingly establishing itself as one of the coolest neighborhoods in the city. It is an important junction between the mainland and the east and west part of the island where Wan Chai is located in the center.

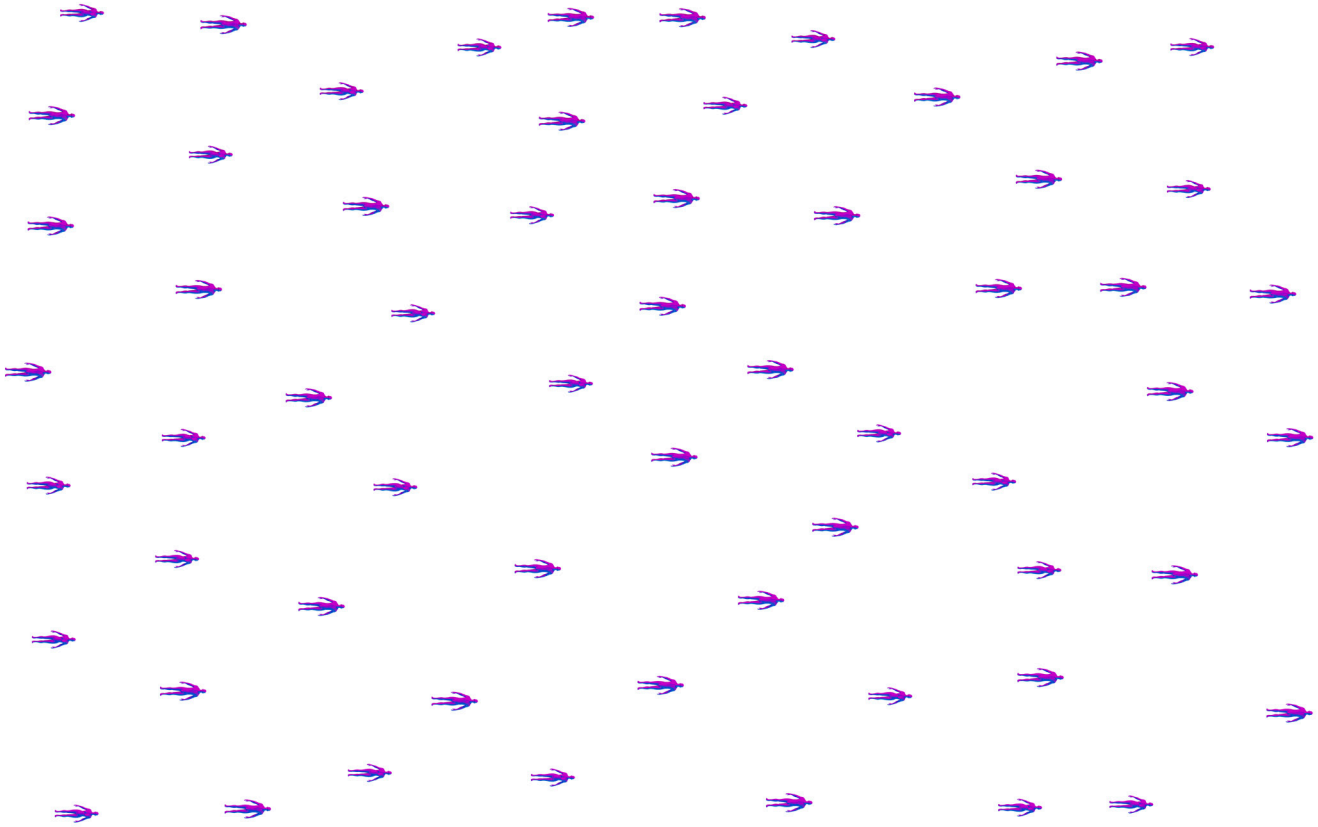
• WAN CHAI FROM THE HOPEWELL CENTRE
02.2020

According to the latest 2016 census, the population of the district is about 180,000 people, which makes up a very diverse range of ethnicities, beliefs, and social statuses, giving the district a cosmopolitan and multicultural image.

• WAN CHAI FROM THE HOPEWELL CENTRE
02.2020

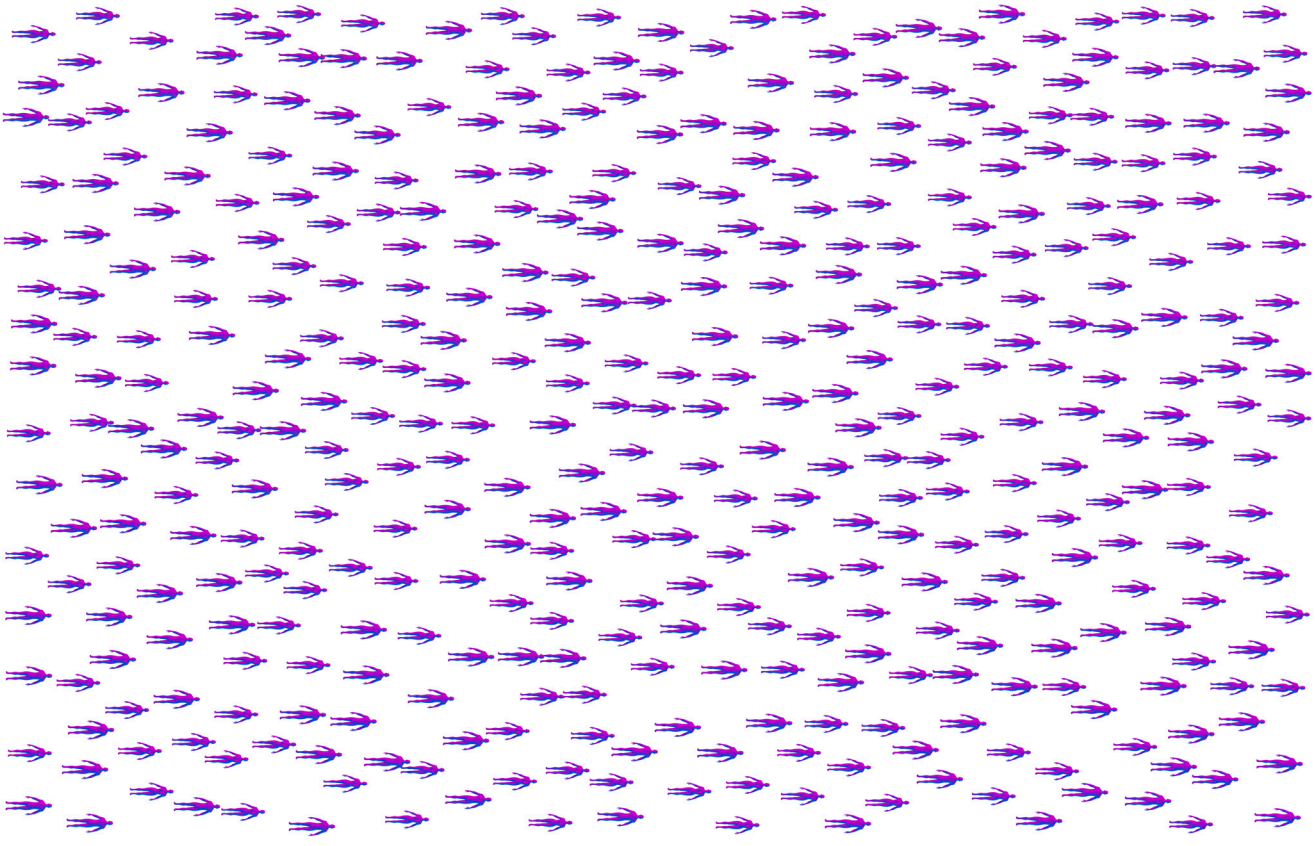
• SOME DATA FROM THE LAST 2016 CENSUS OF THE DISTRICT

256



POPULATION **6.000** PEOPLE/KM² **TORINO** (MY HOME TOWN)

DENSITY **45.000** PEOPLE/KM² **WAN CHAI**



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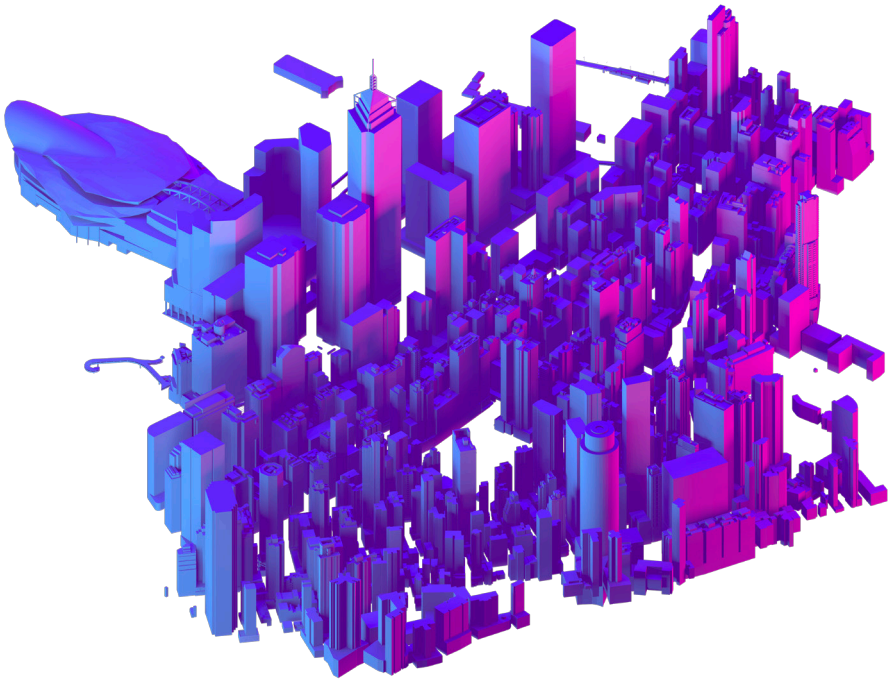


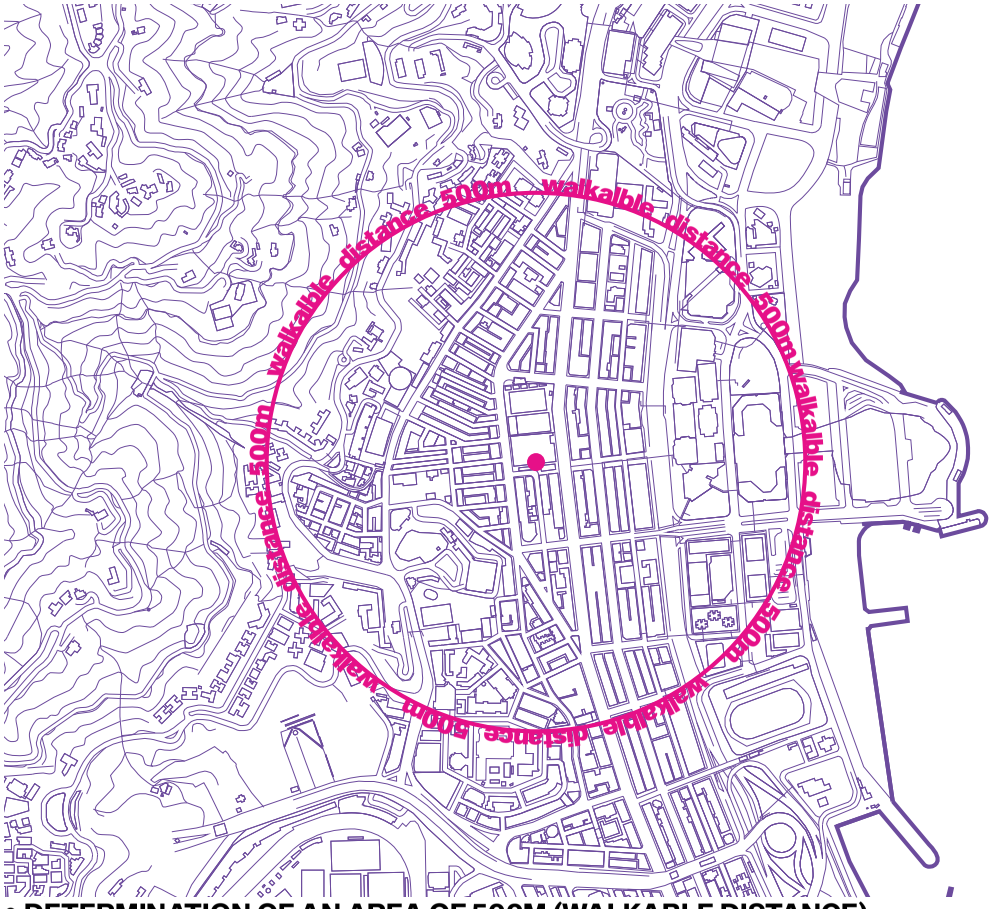
• OF THE AREA UNDER ANALYSIS
FOR THE DEVELOPMENT OF THE PROJECT

PROJECT AREA

項目地區

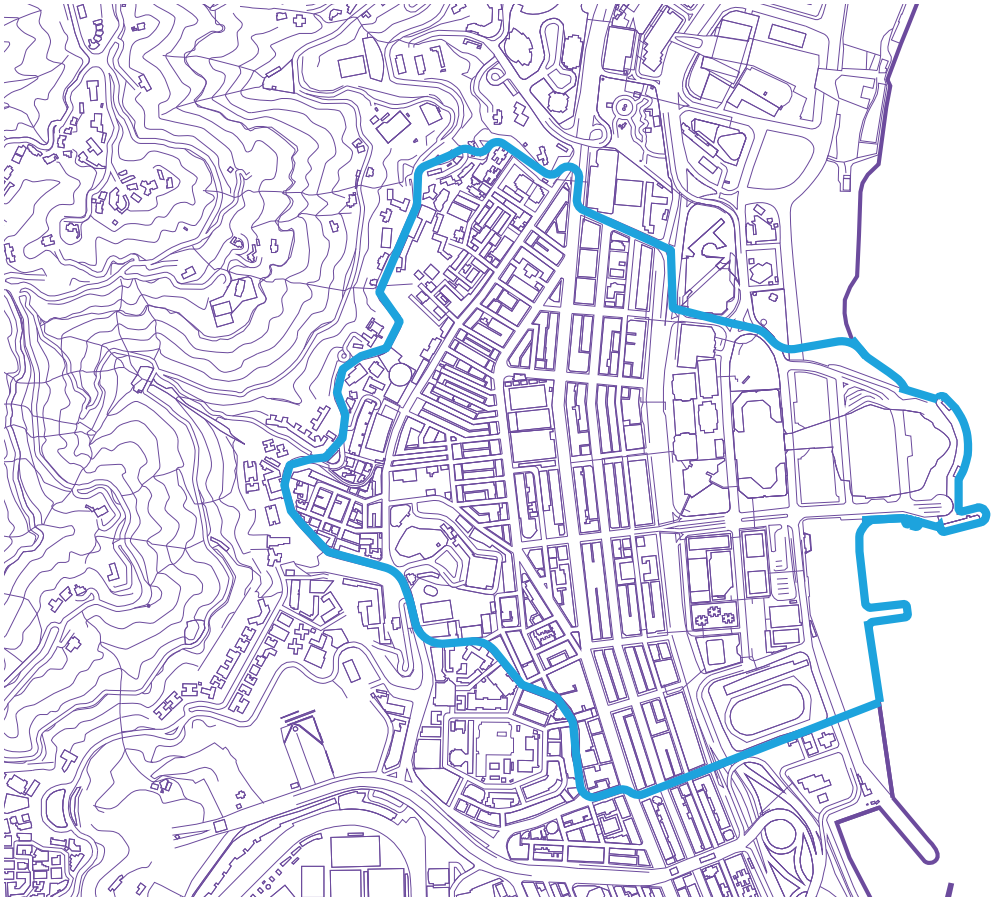
In order to determine the area under analysis, a circumference of 500 meters (walking distance in 10 minutes) has been made from the Wan Chai MTR station, as it is one of the key points of the megastructure of this district. The circumference was then adapted to the urban morphology to better define the examined area.

The area under analysis has a wide variety of building types, starting from the low shop-houses, through mid-height buildings and the very thin Pencil Towers, to the highest tower in the area, the Central Plaza tower.



• DETERMINATION OF AN AREA OF 500M (WALKABLE DISTANCE), STARTING FROM THE WAN CHAI MTR STATION

• ADAPTATION OF THE DELINEATED AREA TO THE URBAN MORPHOLOGY



The average height range of the buildings is between 0-50 meters, this is because the vast majority of the buildings are podiums above which stand towers that exceed 100 meters.

Analyzing the conformation of the urban fabric, you can easily see that there are two different types of fabric: in the lower part, we have the Wan Chai South, where the fabric is more jagged, divided into small lots and very compact. Divided by Gloucester Road we find the northern part of Wan Chai, an area of a recent expansion whose plot presents buildings with larger footprints on the ground than the southern part with a lower density and heights of the larger buildings.

While the southern part has

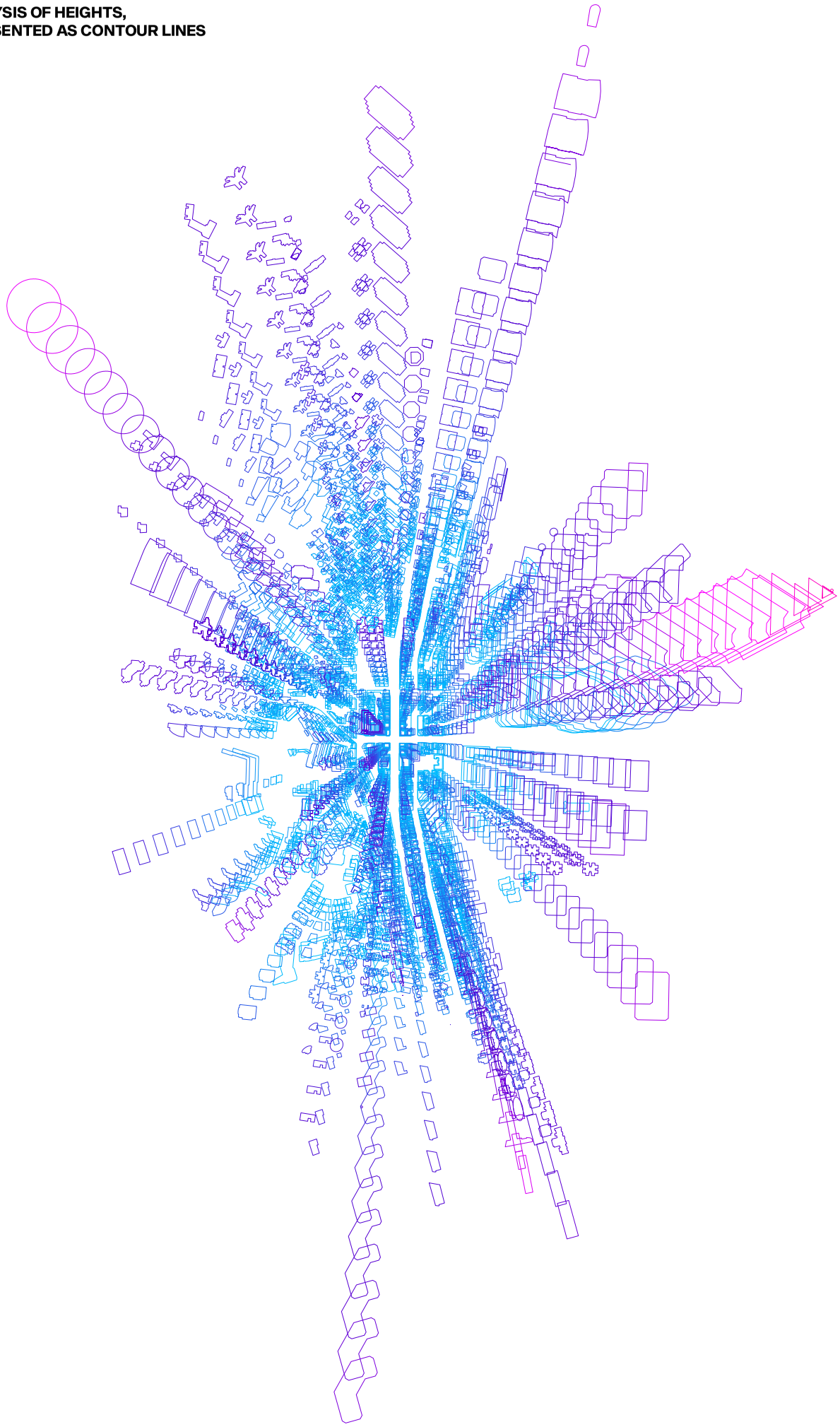
• THE TWO PREDOMINANT URBAN MORPHOLOGIES

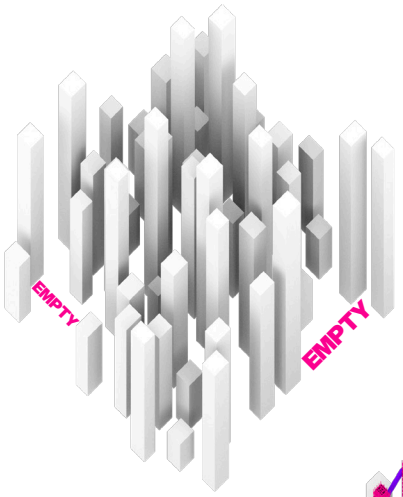
a greater variety of functions and utilities, the northern part has mainly offices, institutional buildings, and hotels. Interesting however is how the system of bridges that creates Wan Chai's megastructure performs the task of sewing these two parts of the city, allowing people to perceive as little as possible this division, both functional and formal given the presence of the motorway.

The area chosen as the starting point for the experimentation on the development of the skyscraper typology is located near the subway station. The decision is in line with the almost natural evolution of the megastructures in Hong Kong, as they see their birth around public transport hubs, becoming elements of these complex systems.

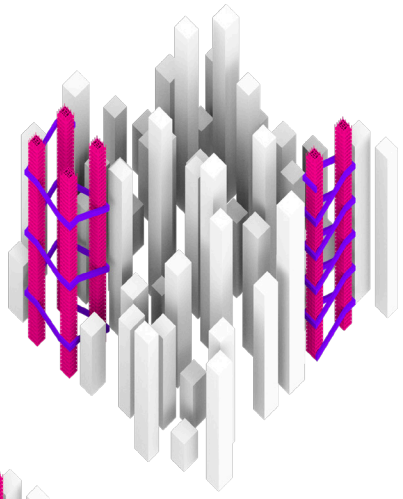
• HEIGHTS ANALYSIS

• ANALYSIS OF HEIGHTS,
REPRESENTED AS CONTOUR LINES

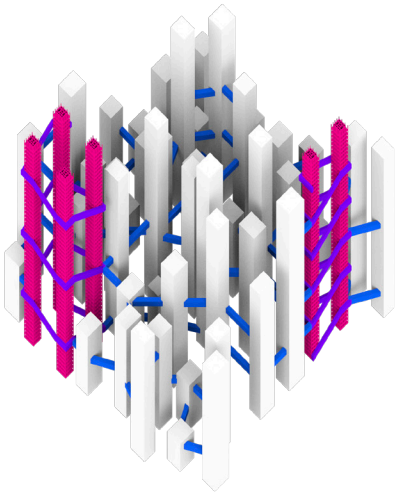




• 1
IDENTIFICATION
OF THE AREAS



• 3
GROWTH AND
DEVELOPMENT OF
THE NEW
VERTICALITY



• 3
GROWTH AND
DEVELOPMENT OF
THE NEW
VERTICALITY

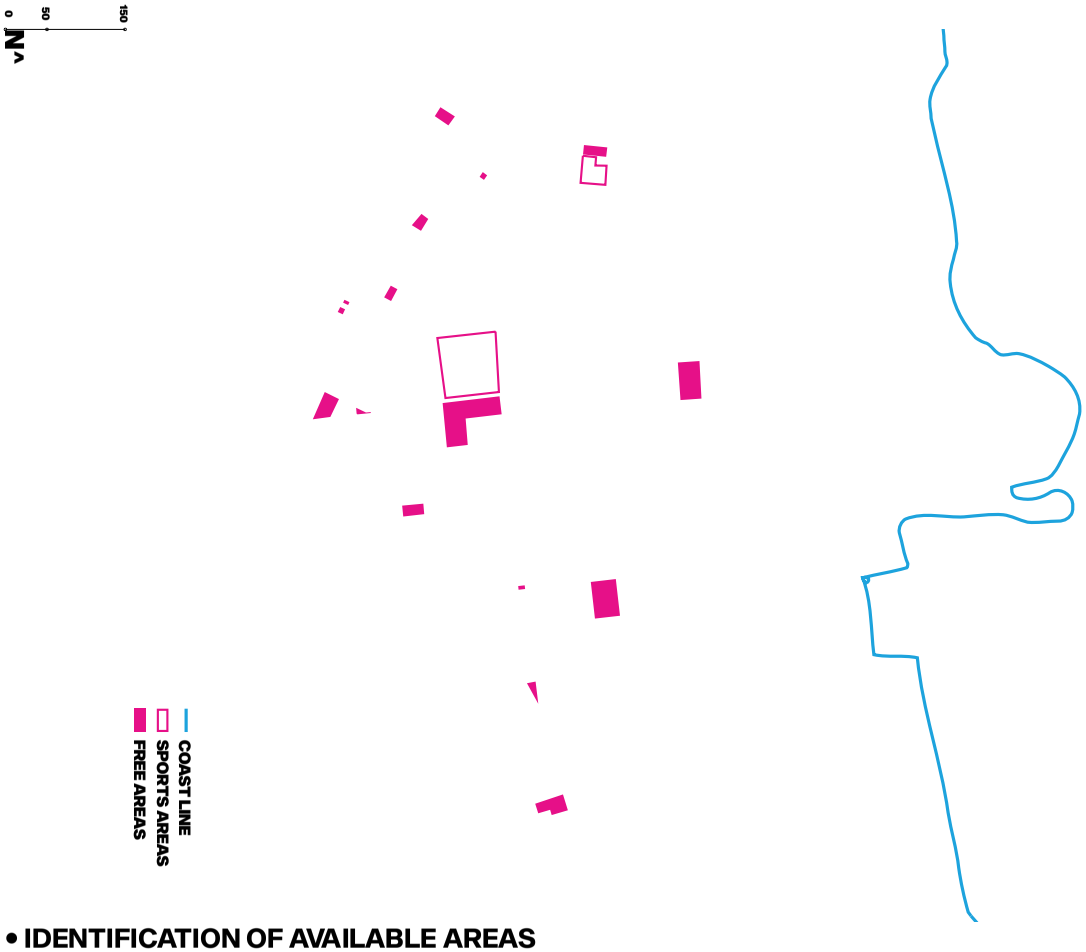
THE STRATEGY

策略

The strategy hypothesized to implement this type of project is articulated in different phases, and leads to the realization of these devices of verticalization of the city.
In the first phase, it is analyzed the area in which you want to operate, in this case, the district of Wan Chai, and havingdemographic , economic but also territorial and formal data, trying to find the lots where to insert the new buildings by connecting to existing public transport networks or bridge systems and other infrastructure. A second phase, where we decide the exact positioning of the cores in the lot, the climbing devices, such as escalators and elevators and connections to the surroundings. In the third phase, the Plug-in architectures and their respective public and private uses are designed, in this part of the project, the public spaces and the program of the building also are designed.

The architectures are plug-ins that are built around the cores as buildings are built around the streets. The modules are free, there is no stylistic rule or particular architectural philosophy, the greater are the differences between architectural functions and forms, the grater is the concept transmitted", the intention is to give expressive freedom by fighting the homologation of the ephemeral extrusion of the site.

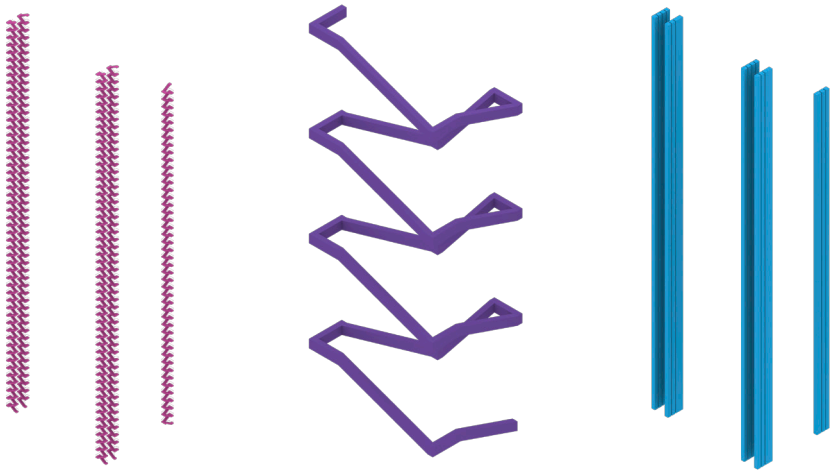
• CURRENT SITUATION



• IDENTIFICATION OF AVAILABLE AREAS

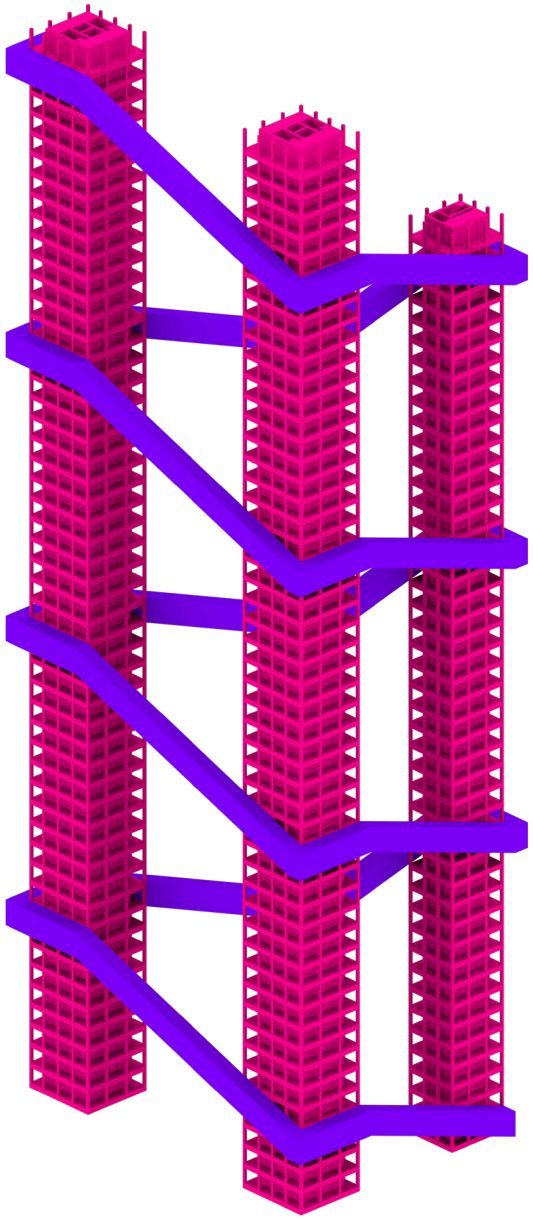
• DEVELOPMENT OF THE VERTICAL CITY

VERTICALIZATION ELEMENTS



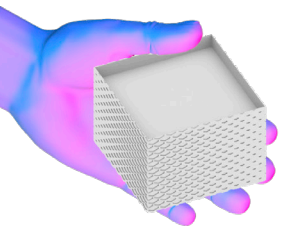
The cores, becomes the accelerator of verticalization of the city. Stairs,escalators and elevators serve to bring people inside this new system of pedestrian mobility.

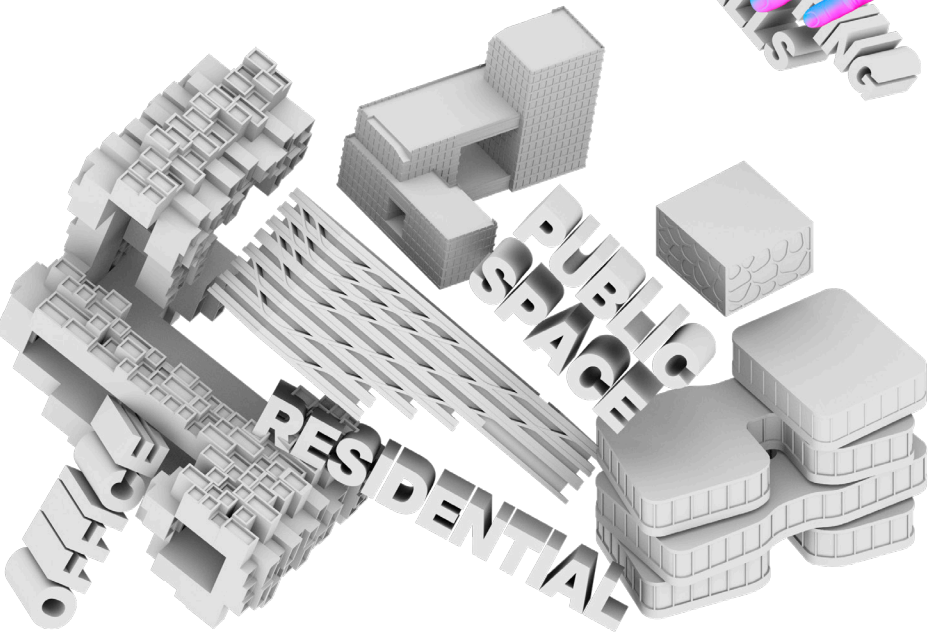
• GENERAL VIEW OF THE CORES AND THE ESCALATOR



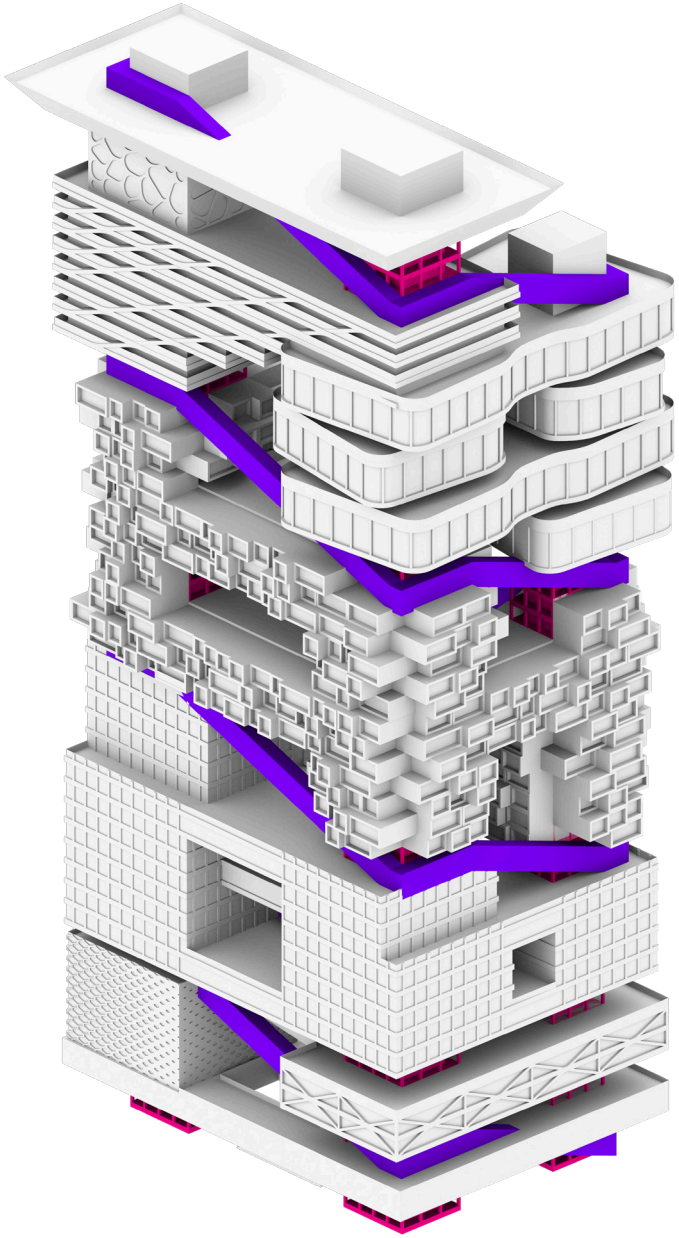
MODULES AND FUNCTIONS

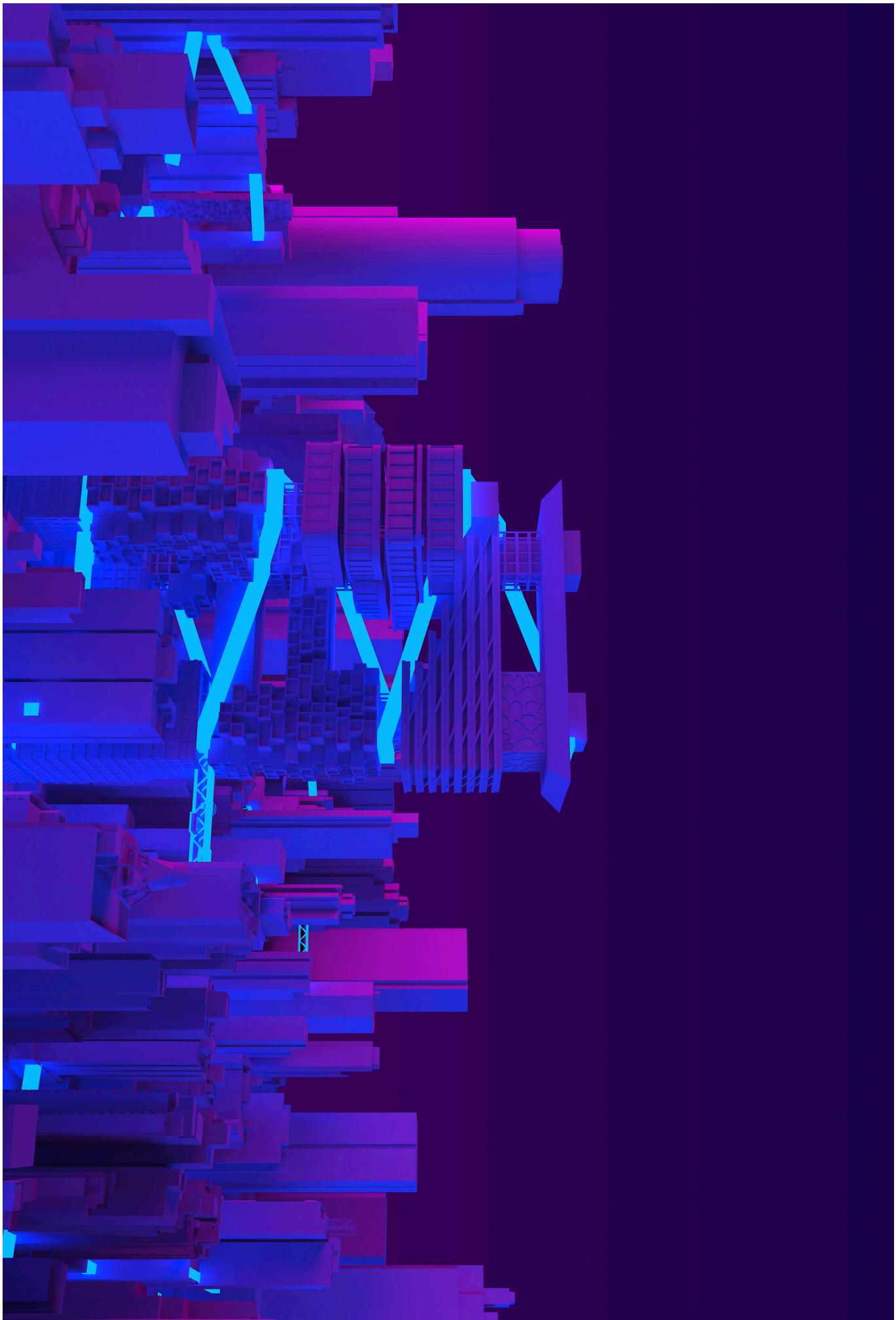
The cores, becomes the accelerator of verticalization of the city. Stairs,escalators and elevators serve to bring people inside this new system of pedestrian mobility.

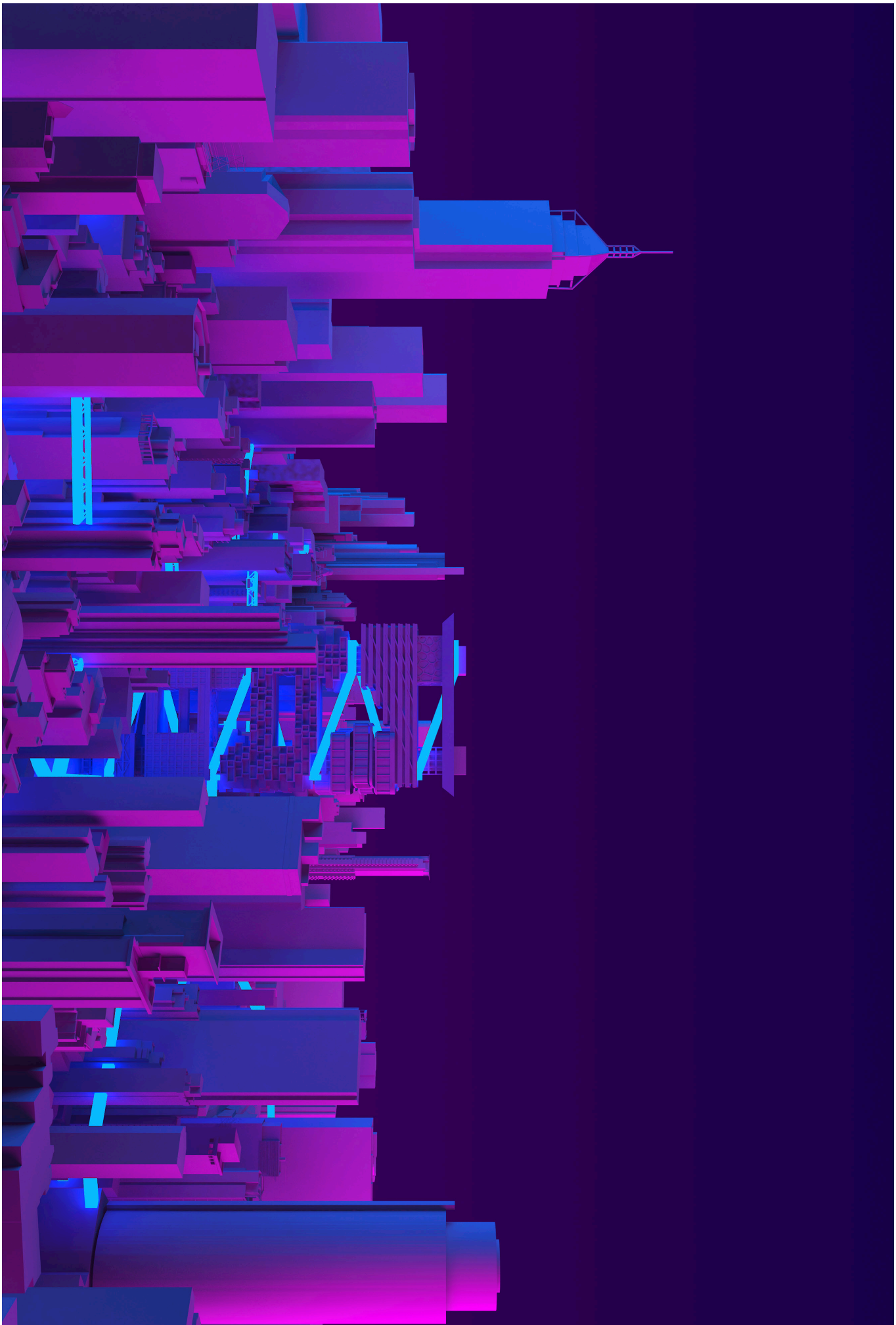


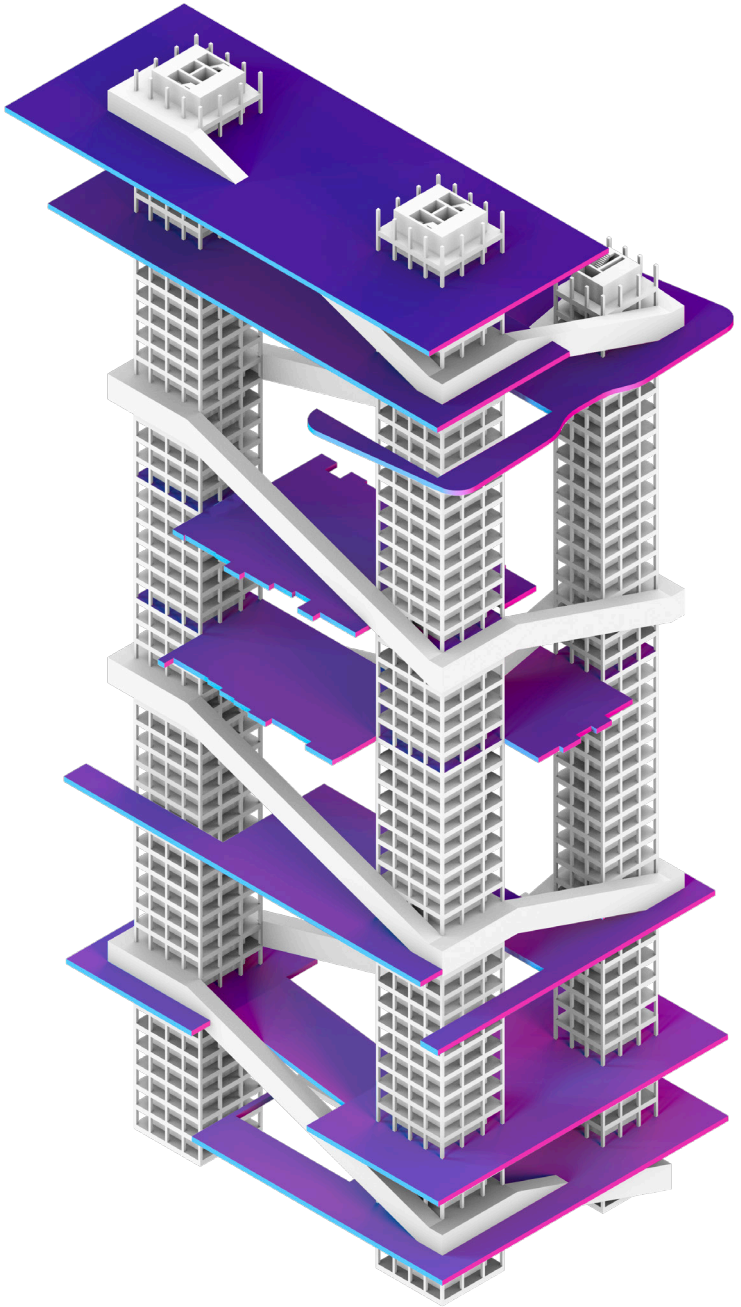


• GENERAL VIEW OF THE MEGASTRUCTURE









• THE MEGASTRUCTURE WITH ONLY PUBLIC SPACE

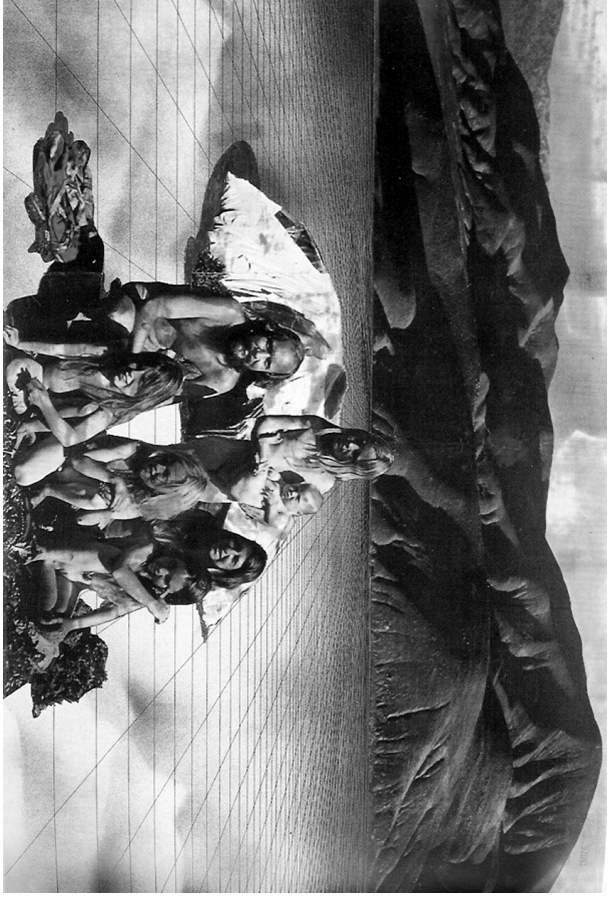
PUBLIC NEW SPACE

新公共空間

As far as the design of public space is concerned, the idea is to draw on Superstudio's concepts of "Supersuperficie" and Archizoom's "No stop city" in which we see a vision of a future city that denies the architecture itself.

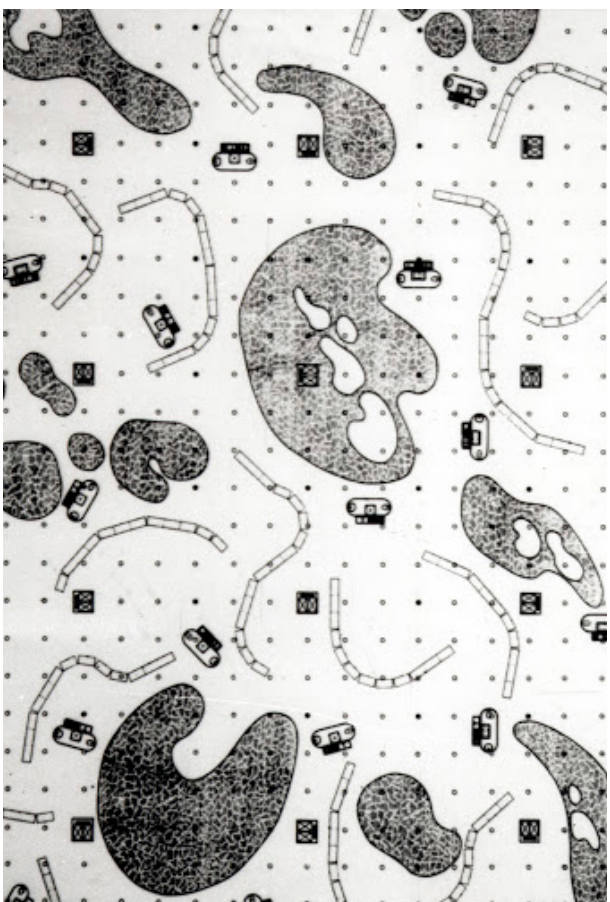
The Supersuperficie of Superstudio becomes the basis of the new public space, the place in which to express oneself, and it is the very basis that, being divided into modules, rises and modifies its topology by opening up and in some way humanizing itself, adapting ergonomically to the user's need.

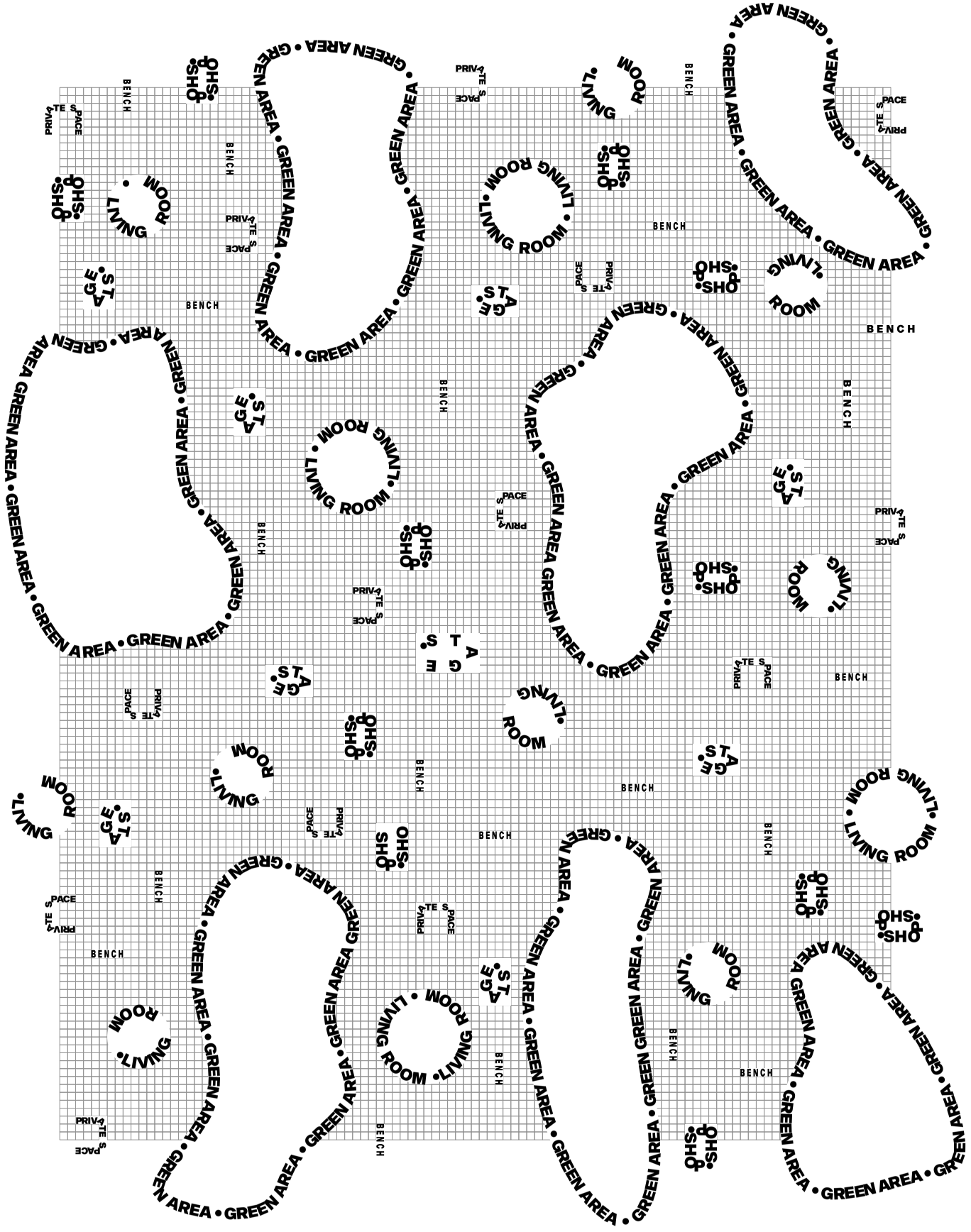
Above the base, which is no longer inert but is alive, we find elements useful to the life of the new public space, these elements are different: from green space to stages where to perform, from shops to small living rooms ready to be occupied.



• 2 Superstudio, Supersuperfice, 1972

• 3 No-Stop City, Archizoom Associati, 1971



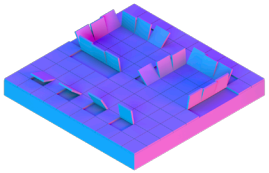

GREEN AREA
LIVING ROOM
STAGE
SHOP
PRIVATE SPACE
BENCH

The designed public space is free, the activities that can be carried out above the surface are not limited, unlike the public areas of Hong Kong that are dotted with prohibitions. All away the areas where to do sport are very present in the territory as if the only public space allowed is an area where to go to do sport, the areas that instead are scarce are those of leisure, parking, and meeting.

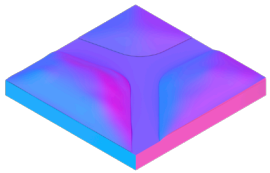
The human being, as we have seen in the previous chapters tries to remedy the lack of space by creating it in areas that are not designed for that type of use. This phenomenon has helped me to understand how often public space should not be something imposed from above, but a space of freedom.

An area where anyone can create their own space, where the bodies themselves create architecture. The intention is to design the space, foreseeing possible functionalities, aware of the analyses made, but at the same time giving people the freedom to make that space their own.

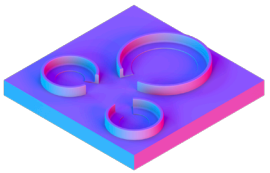
• CATALOGUE OF PUBLIC SPACE ELEMENTS



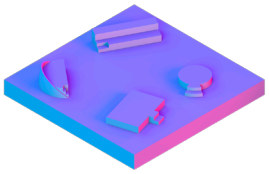
living surface



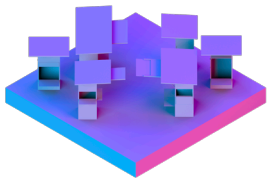
green areas



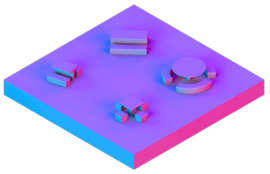
urban living room



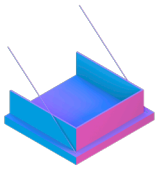
stages



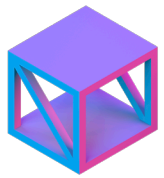
pop-up shops



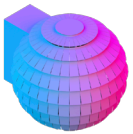
urban dining room



open plug-in
new space

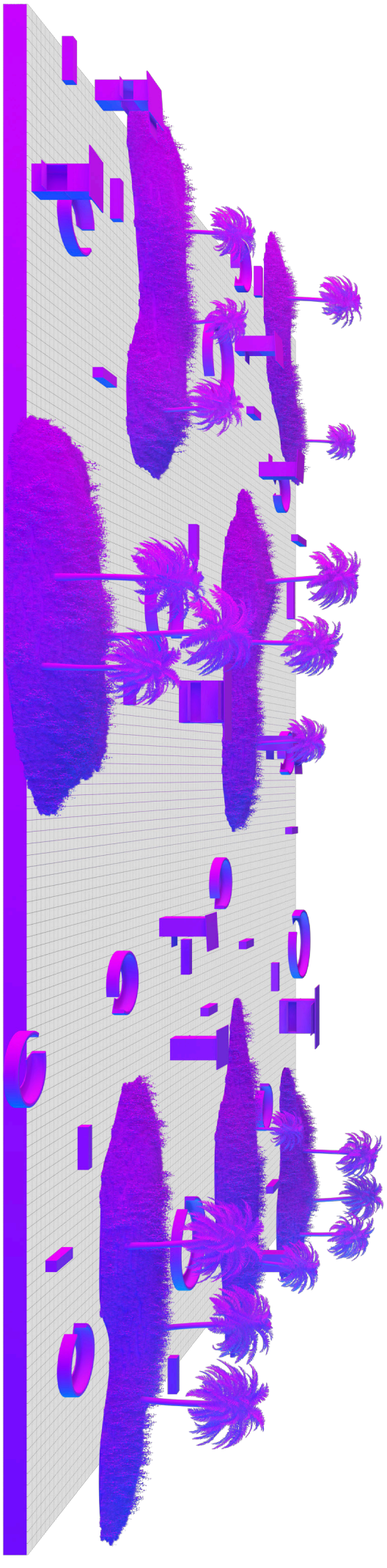


semi-closed
plug-in new space

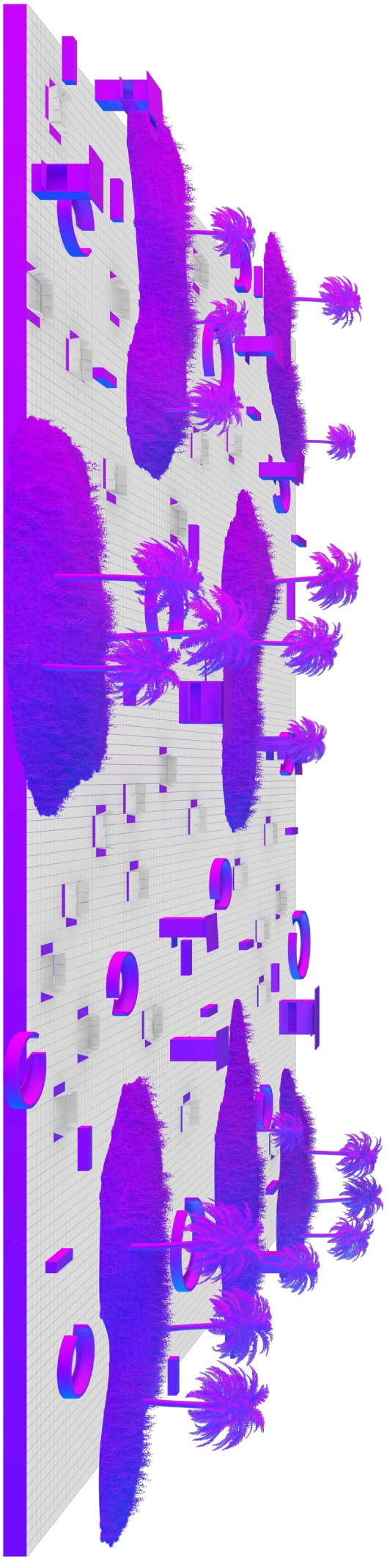


closed plug-in
new space

• VIEW OF THE STRATEGY,
WITH THE SURFACE CLOSED

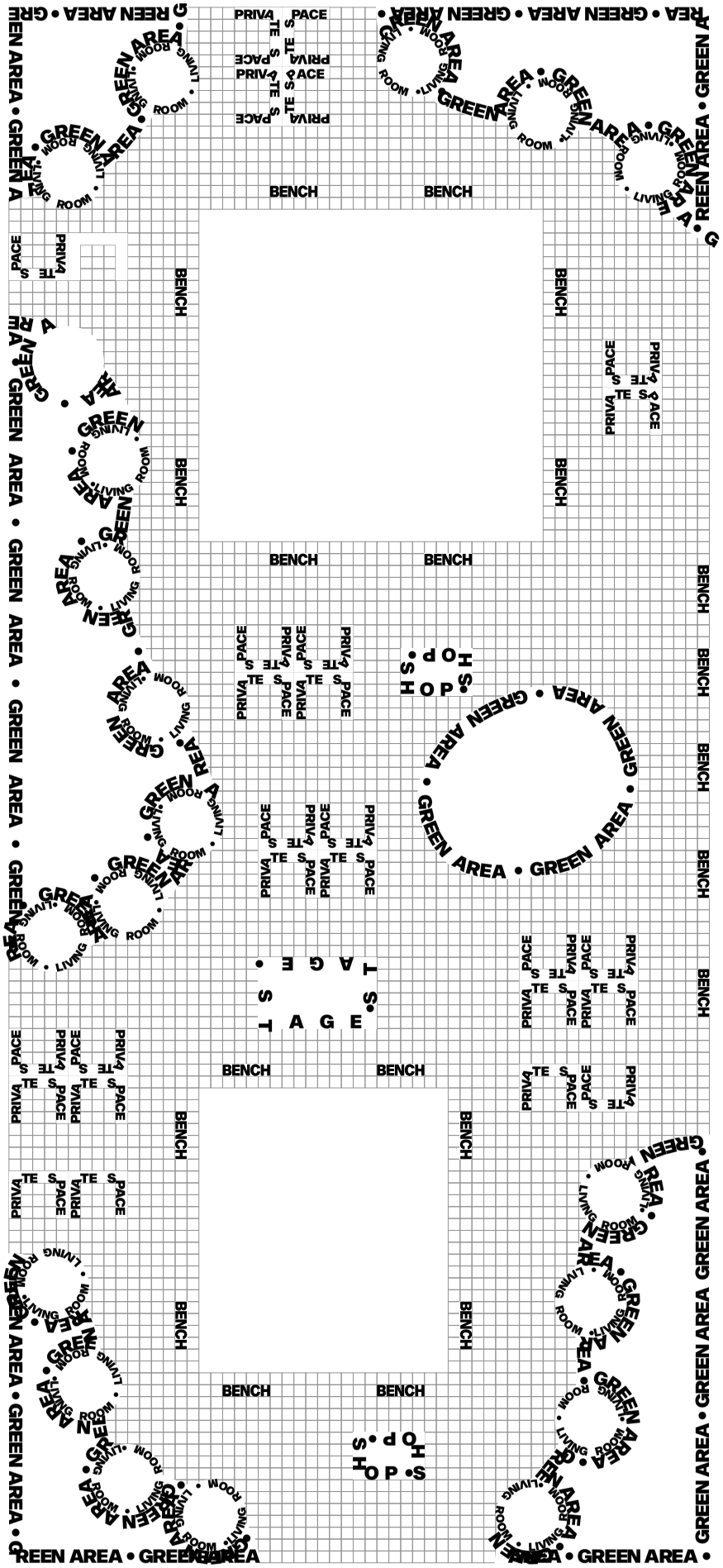


• VIEW OF THE STRATEGY,
WITH THE OPEN SURFACE

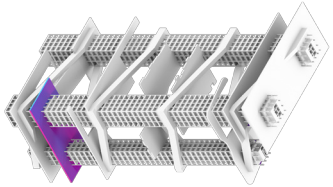


SQUARE N° 1

• LAYOUT OF THE SQUARE N° 1

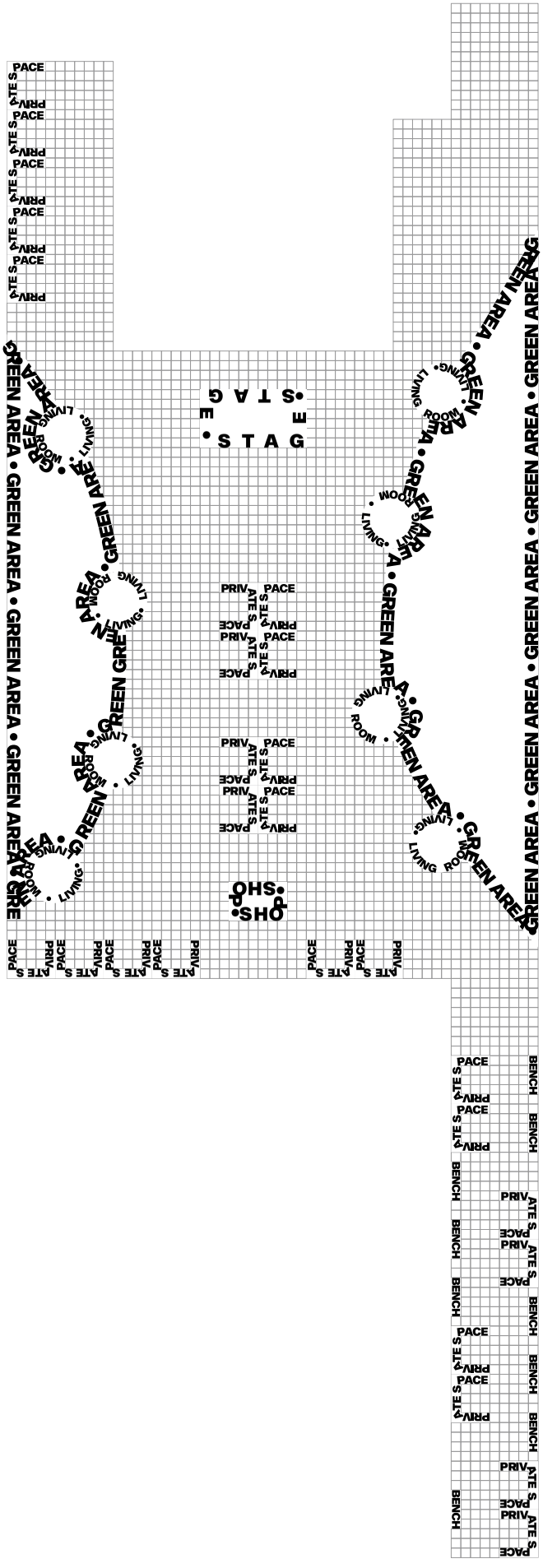


• KEY PLAN

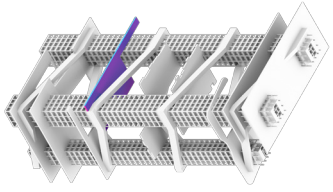


SQUARE N°2

• LAYOUT OF THE SQUARE N°2



• KEY PLAN

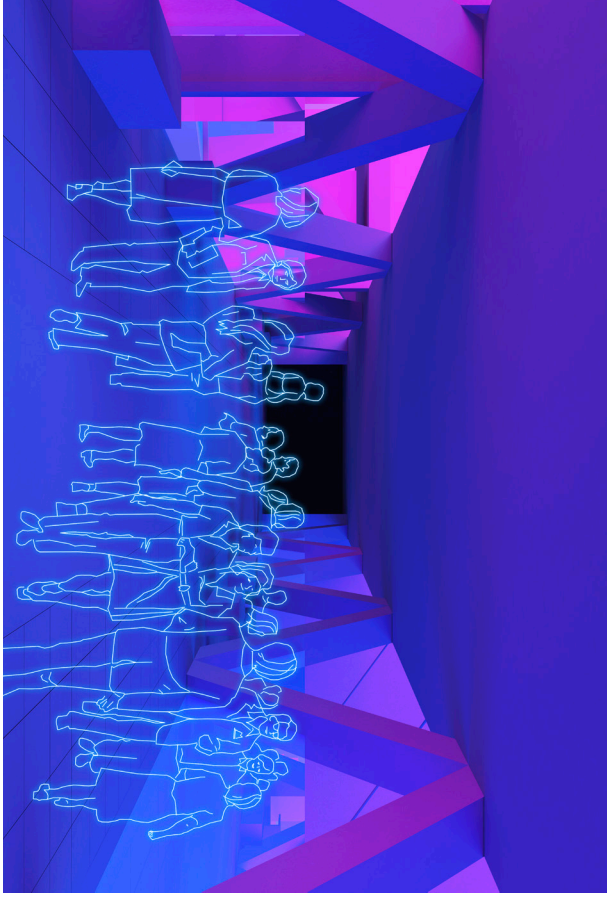


• SQUARE N° 2

SQUARE BRIDGE

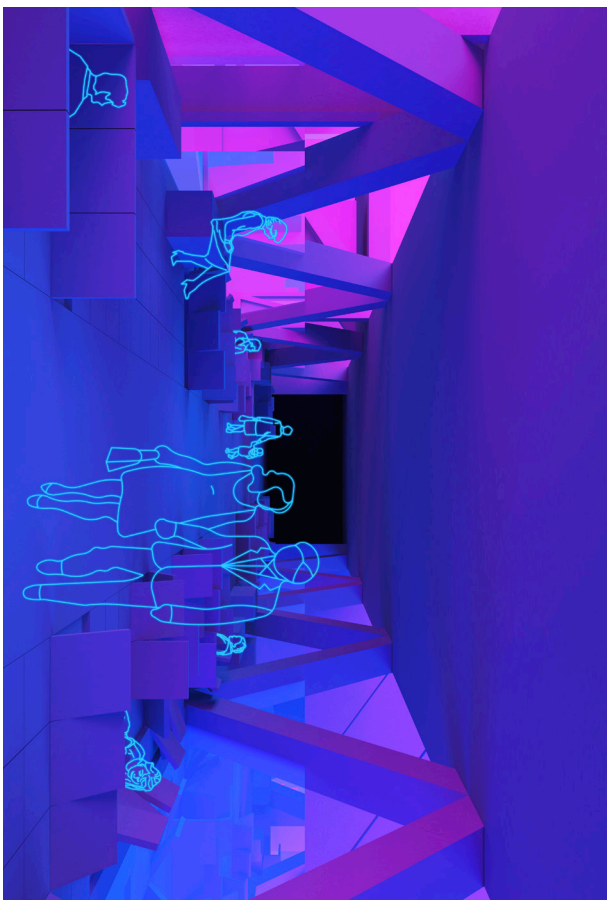
• LAYOUT OF THE SQUARE BRIDGE

304

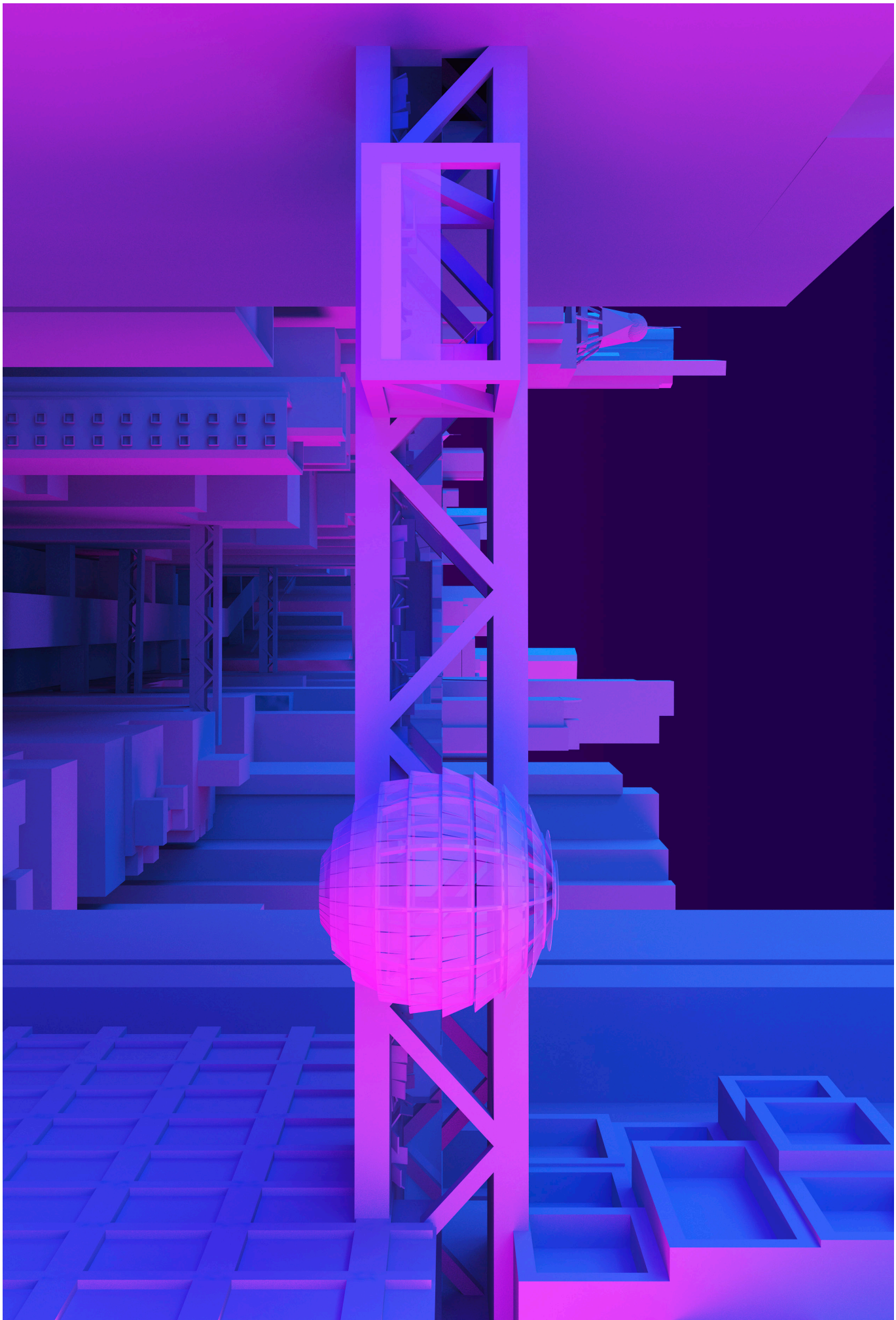


• SQUARE BRIDGE CLOSED

• SQUARE BRIDGE OPEN



305



CONCLUSION

總結

The thesis work developed starting from the analysis of the typology of the skyscraper, in its architectural dimension and its relationship with the urban fabric, was the basis of the field research carried out in Hong Kong.

It was important for the study to analyze the Asian city as a paradigm of the vertical city: where the urban density, population, and the little available land gave an interesting case study to live and analyze. Once we understood the salient points of the typological evolution of the tower building and its possible developments we moved on to the case study, in this case, Hong Kong.

The verticality of this city was analyzed, in particular its development and the relationship between settlements and this extrusion towards the sky. Living and doing research in the field it has been important to study the networks of connections that unite the buildings and sew different parts of the urban fabric; it was interesting to see how the great density of buildings and population has not preserved the public spaces that the inhabitants have created themselves by occupying the new ground zero of this city without land. Finally, we proceeded to study the macrostructures created in this city, choosing where to develop the meta-project.

The thesis work does not want to propose a definitive solution to the question of what will be the fate of vertical cities, the final project is not a point of arrival. It can be considered as a new starting point from which to continue to analyze the process of verticalization and urban densification in greater depth.

In the meta-project, we can notice an almost humanization of the high-rise building, breaking it down into elements that destroy its monumentality by opening it towards the city. The ground floor loses its uniqueness, being multiplied and re-proposed at different heights, new surfaces colonized by people become public space. The focal point of the thesis work is not the project in its detail, but in its ambition and strategy, thinking of the tall building as a more urban than just an architectural element.

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Secondi,minuti,ore,giorni, mesi, anni o tutta una vita. Non importa per quanto tempo le nostre strade si siano incrociate, ma ti sono infinitamente grato. Sorrisi o pianti, feste o litigi, lavoro o svago, gioie o dolori, risate o silenzi, abbracci o distanze, ogni singolo momento passato insieme mi ha permesso di conoscerti e farmi conoscere, di schiudermi e farti schiudere. Il tuo incontro nel piccolo o nel grande mi ha cambiato la vita, la tua storia mi ha affascinato e forse senza nemmeno saperlo mi hai donato più di quanto tu possa pensare. Ho fatto tesoro di ogni tuo consiglio, ho riflettuto dopo ogni tua critica, ho cercato di essere presente nel momento del tuo bisogno e mi sono commosso al ricordo dei momenti passati insieme. Ho gioito per i tuoi traguardi come se fossero i miei, il tuo vissuto mi ha ispirato, i tuoi sbagli mi hanno insegnato, la tua felicità è stata la mia. Nella mia vita hai lasciato un segno, una cicatrice, intesa nel senso più bello che può avere questo termine: e quest'impronta è la cosa più preziosa che possiedo. Ogni segno lasciato è un attimo vissuto, un momento di crescita che ha modificato per sempre la mia vita ed è merito dell'insieme di queste bellissime cicatrici, custodi di memorie ed emozioni, che sono la persona di oggi. Non conosco un vocabolo che descriva completamente la mia gratitudine nei tuoi confronti, perché forse è uno di quei sentimenti che è giusto rimangano senza totale descrizione. Vorrei dirti però, che ti sono grato e che questo piccolo traguardo è merito anche tuo.

GRAZIE