

An aerial, isometric view of a city model. The buildings are represented by light green rectangular blocks of varying heights. The ground is dark grey, and the roofs are light green. Numerous small green trees and plants are scattered across the rooftops and in the spaces between buildings, illustrating a green city design. The overall color palette is dominated by shades of green and grey.

SHARED GREEN PUBLIC SERVICE

**Tsinghua-NUS Sharing Cities Joint
Studio 2020: Tsinghua Studio**

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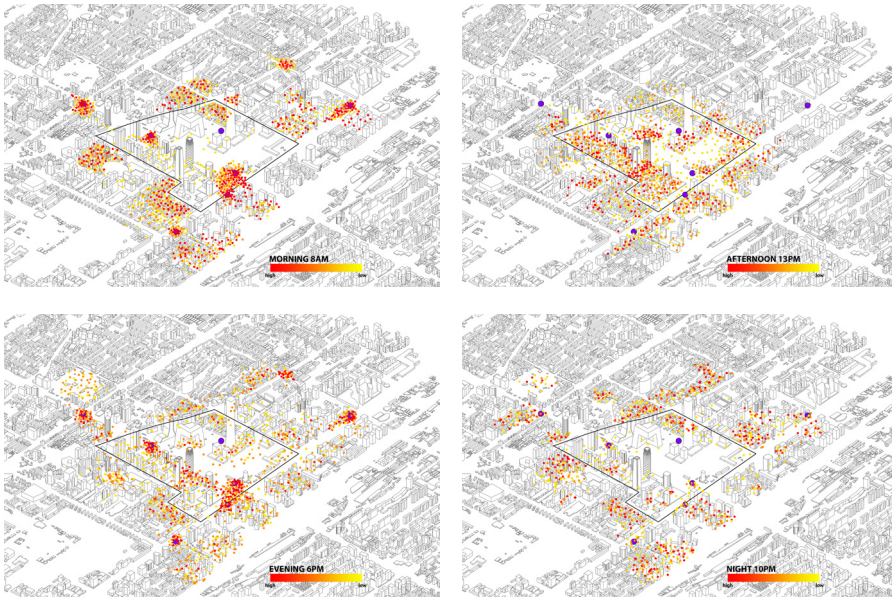
and Nature

When Was the Last Time Communities ✓ Were Taken Into Consideration in Designing CBD?

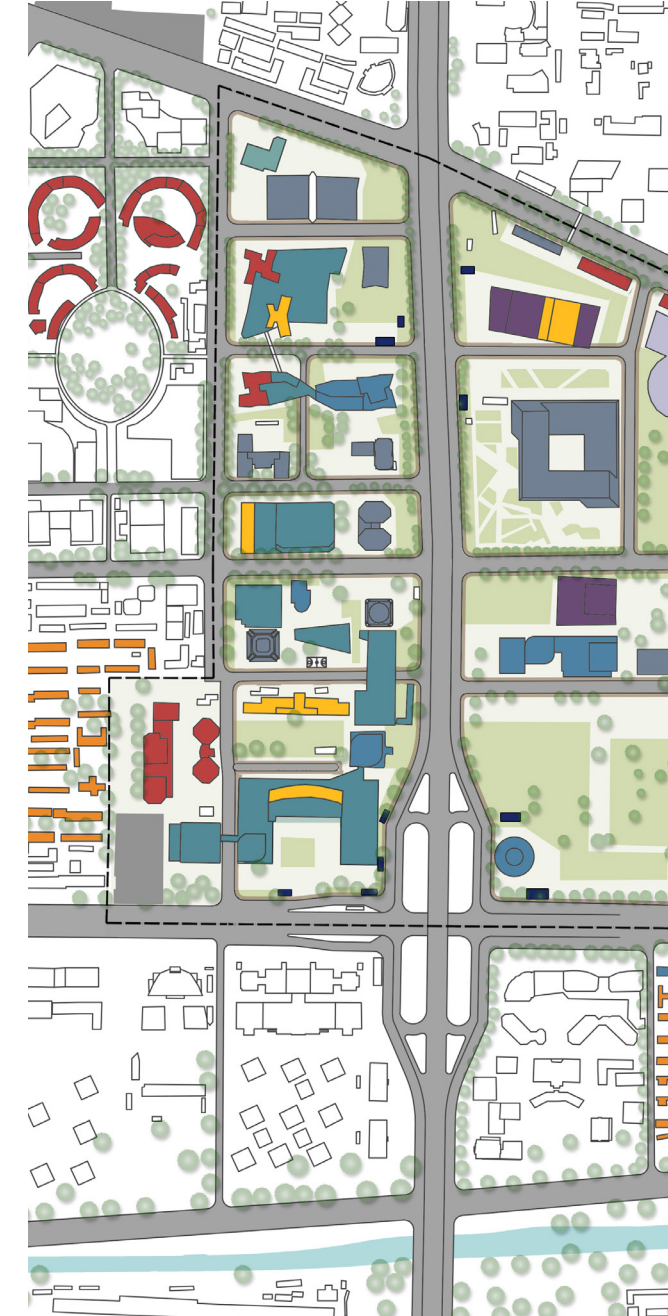
Issue

Separate Communities

In CBD, public services tend to gather near the residential area. This issue causing the lack of interaction between communities. These also creates CBD only serves as a working place, where it is so busy in rush hour, but become dead area where no one stays after working hours finish.



Unutilized and Uneven Public Service



es



LEGENDS:

- Residential - above 6 floors
- Residential - 6 floors and below
- Hotel
- Shopping / entertainment
- Office / retail
- Office
- Culture / education
- Service building
- Administration
- Parking lot
- Automobile
- Subway entrance

Green Service

Closing the Gap

The project focuses on closing the gap between the three disconnected communities (Workers, tourists and residents) by creating public services through green infrastructure. Services that focus on the future, energy sustainability, and the ecosystem.

Ecosystem

Flooding and Biodiversity

The future green public service should be able to create future interaction between humans, humans and nature and interaction between natures components itself. By creating spaces that focus on the futures interactions and connects buildings, encourage biodiversity, and deals with the issue of flooding

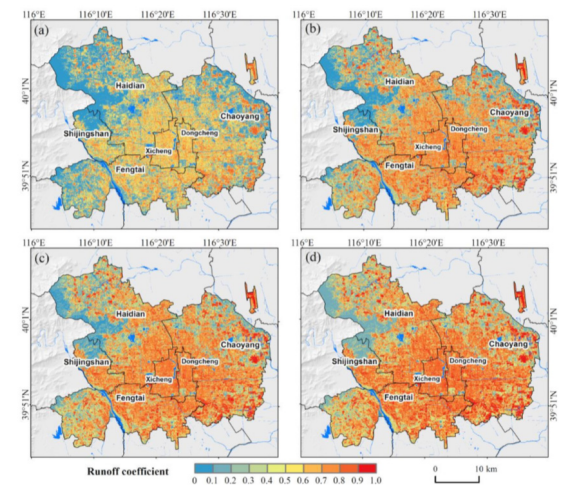
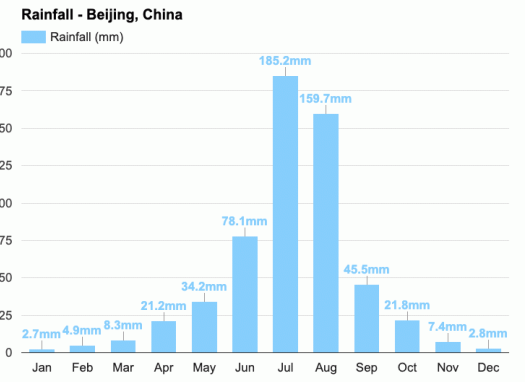
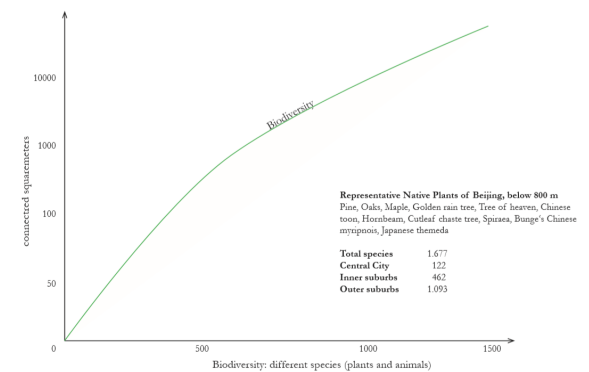


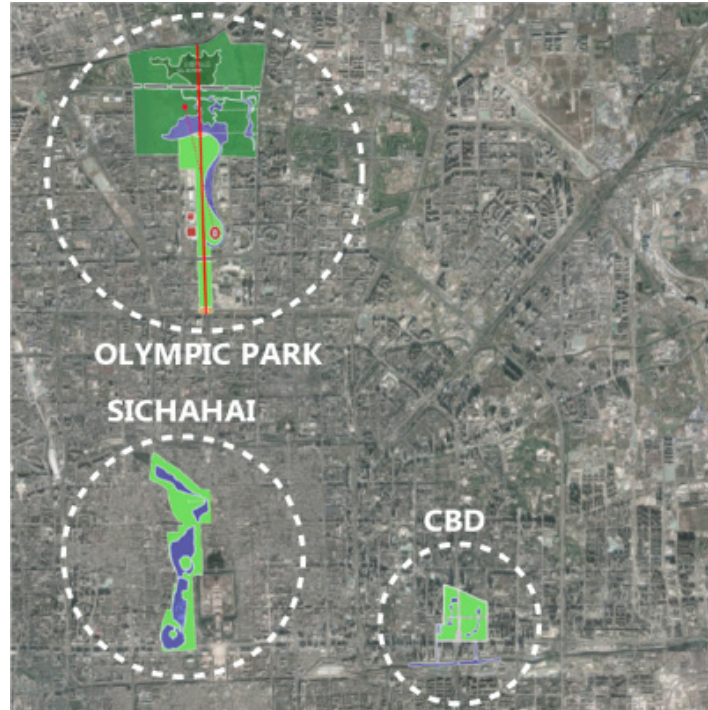
Figure 3. Spatial distributions of the urban runoff coefficients for 1-year (a); 10-year (b); 25-year (c); and 100-year (d) rainfall return periods.



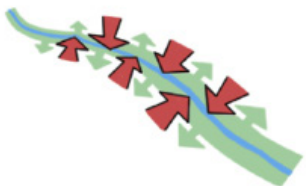
Concept

Park-Lake Strategy

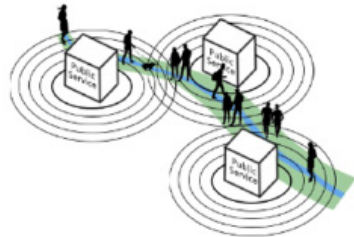
Located in the CBD area Beijing, this project relates not only to the local neighborhood scale but also the overall city scale. With the different layers of public services, the project ties it together with the city by relating to the historical lakes and the Olympic Park. This park - lake strategy brings the local identity of the city into the neighborhood of the CBD area.



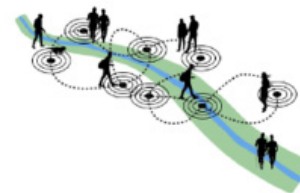
INTEGRATION of public service in the green and blue system

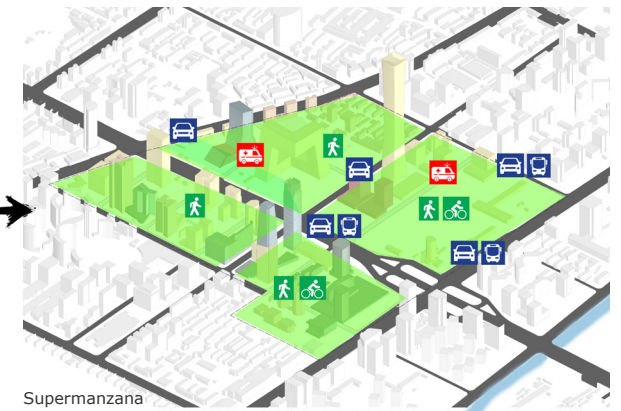
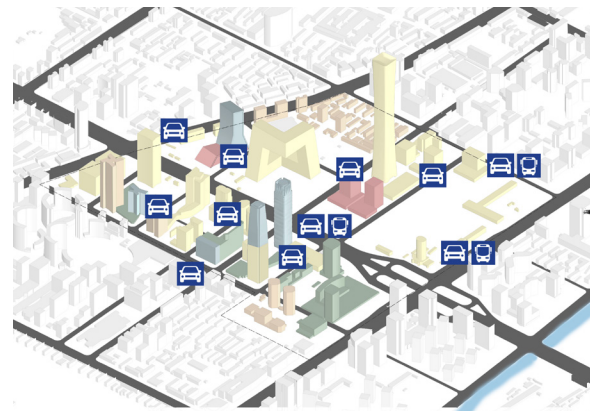


ADAPTABLE public service to the green and blue system



TOLERANT / FLEXIBLE systems for all users



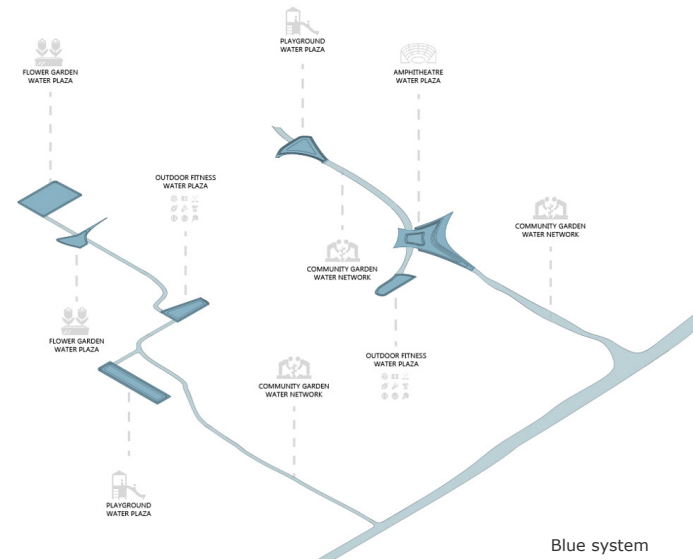


Supermanzana

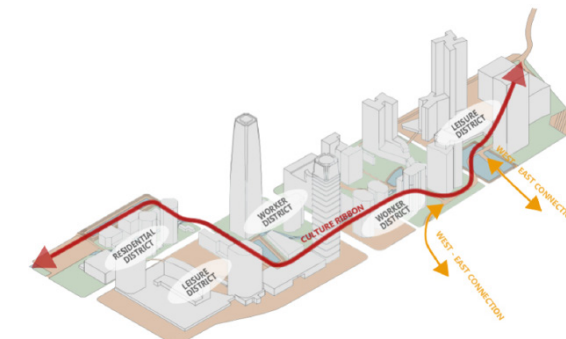
Green-Blue Connection

Mixing the functions using the supermanzanas concept allowing for more green space. Each supermanzana block is connected with the others through the green and blue systems.

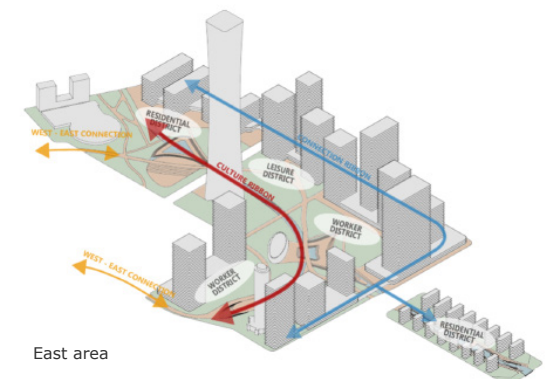
The systems act as energizers allowing the public services to be placed around them.



Blue system



West area



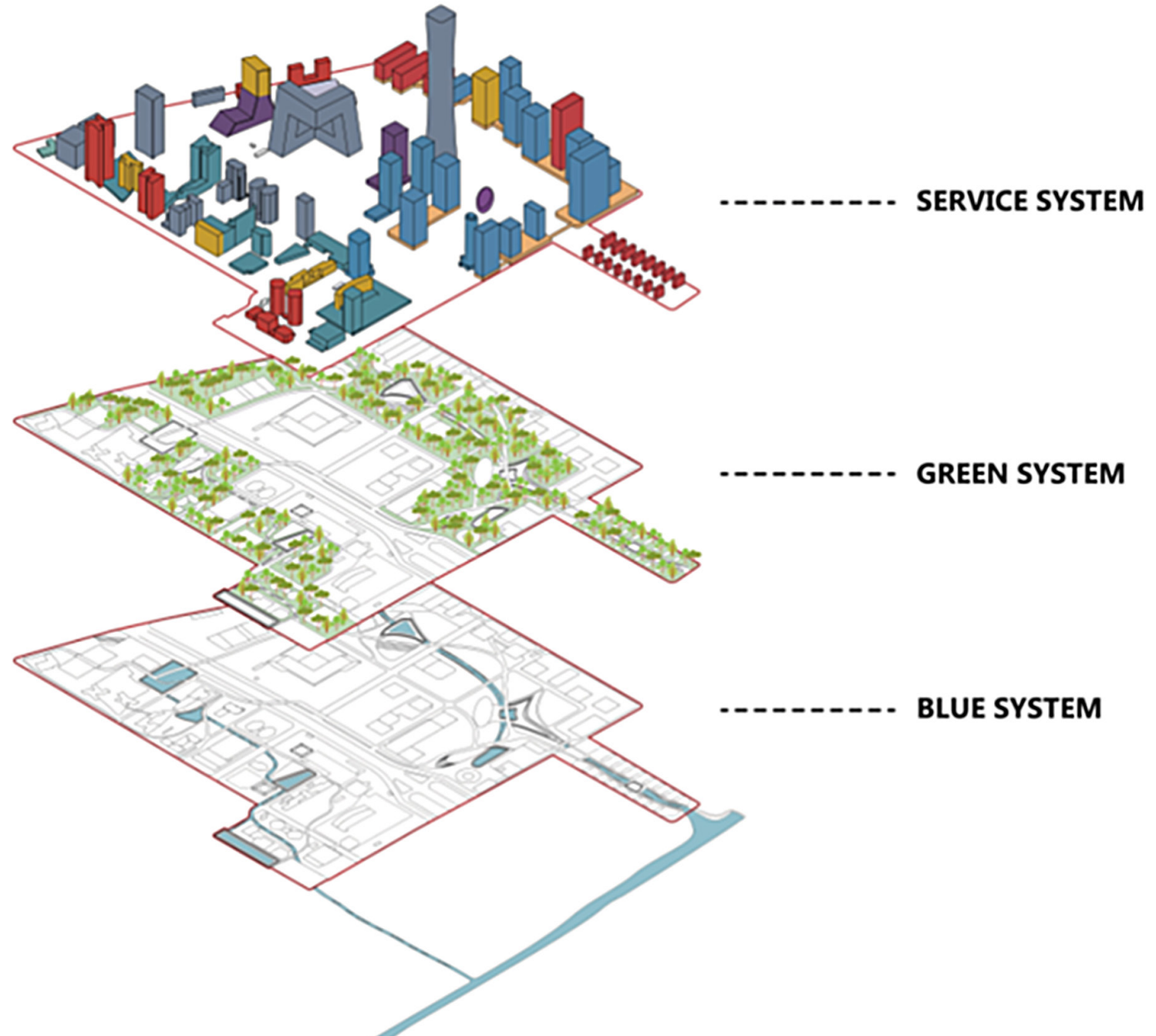
East area

Green Public Services

Mixing the Layers

To solve the community services problem in CBD area, working in layers are important. The main focus of this projects are public services that can connect all communities and also connect to the nature, so there will be 3 layers of the systems: service system, green system, and blue system.

Other than that, to connect the whole communities in CBD (workers, residents, and visitors), the project also mixing the functions of public services in every area. By doing this, all communities could interact each other and made a whole new CBD area that has vibrant and lively community life.

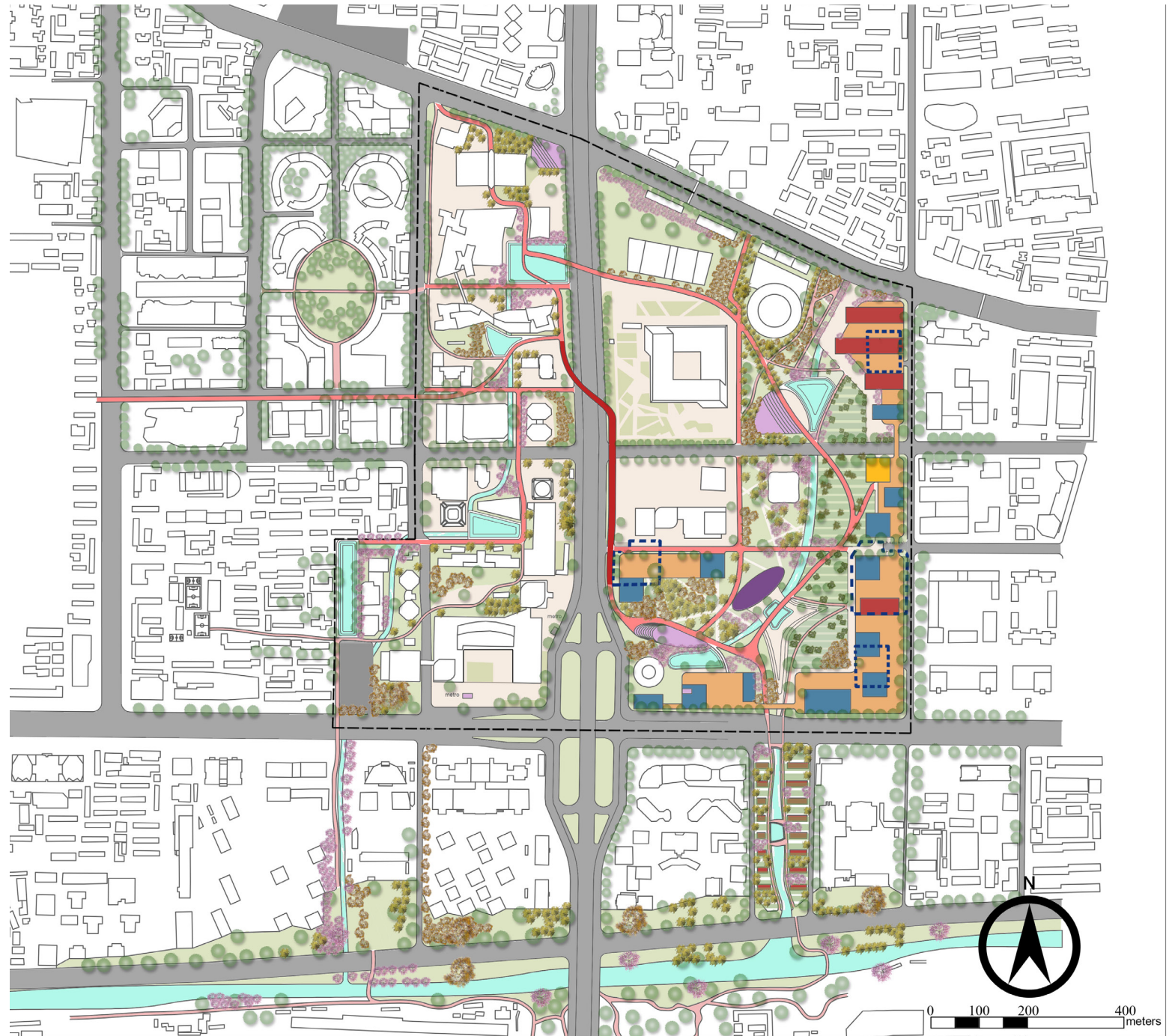


LEGENDS:

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- Service building
- Administration
- Parking lot
- Automobile

NEW:

- Public service
- Subway entrance
- Art library
- Underground parking
- Water plaza
- High line
- Big pathway
- Small pathway



Urban Design of Guomao Central Business District, Beijing

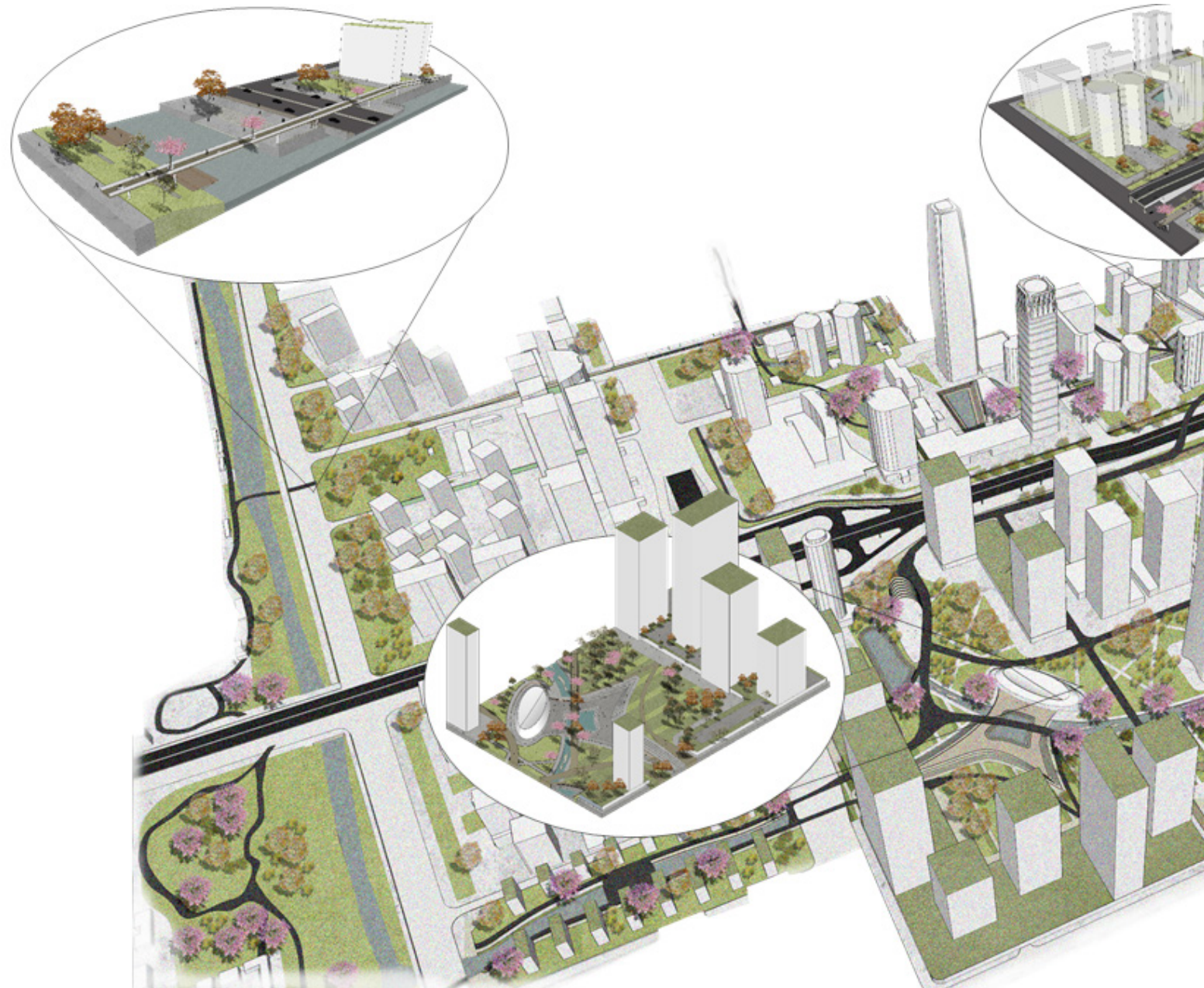
Green Infrastructure

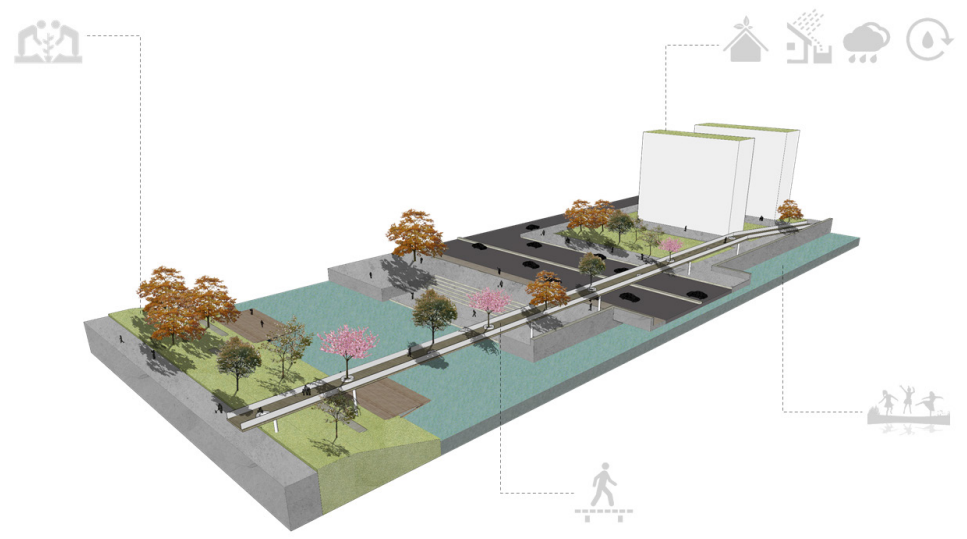
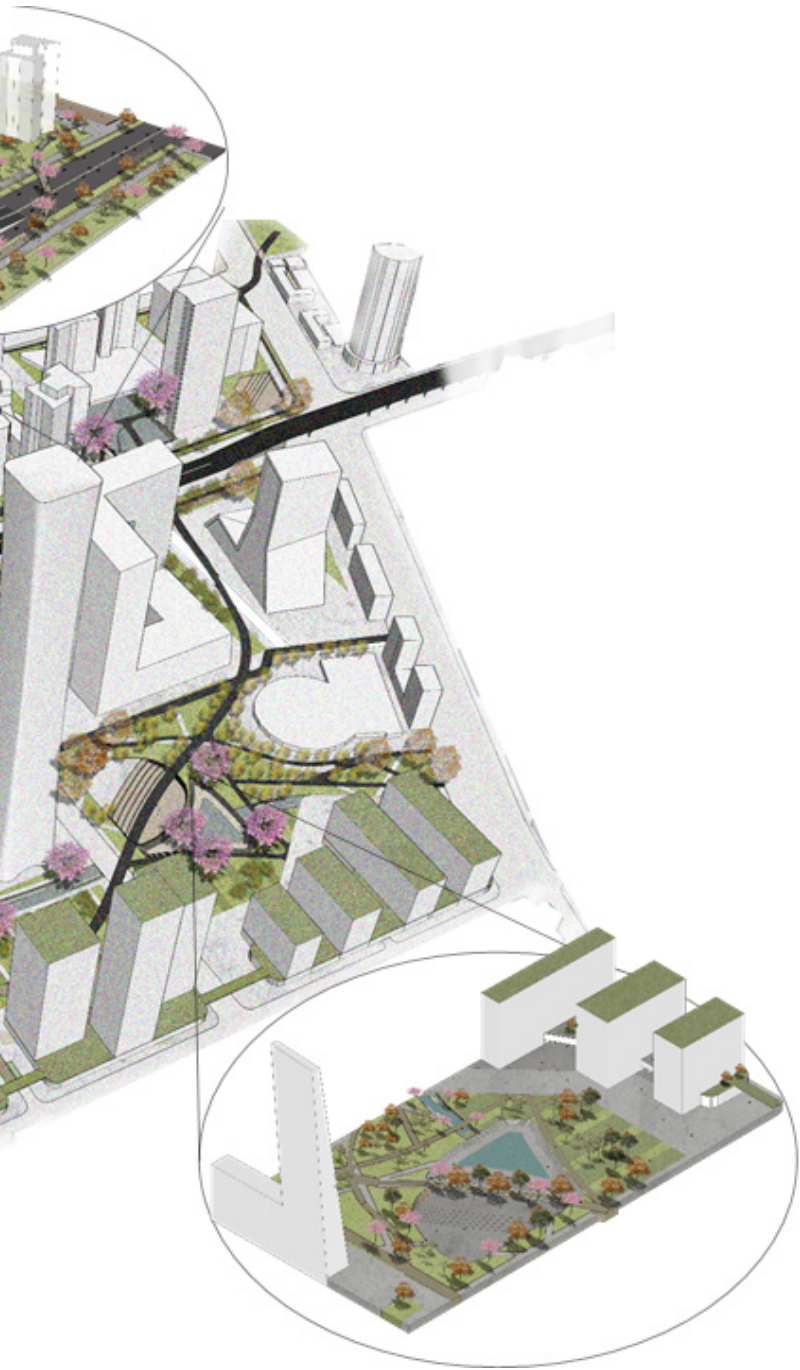
CBD Green Belt

This green belt goes throughout the Beijing CBD linking all sections (north, south, west and east) using green interactive public spaces.

The new design provides changes in the specific nodes such as the river side, west building plazas and the west intervention itself. Providing different public spaces, amphitheater and flooding saving water plazas for instance.

As part of the design, the new vegetation is also included, implementing local plants and trees into the nodes, and the inclusion of all these vegetation into our intervention.





Urban Design of Guomao Central Business District, Beijing

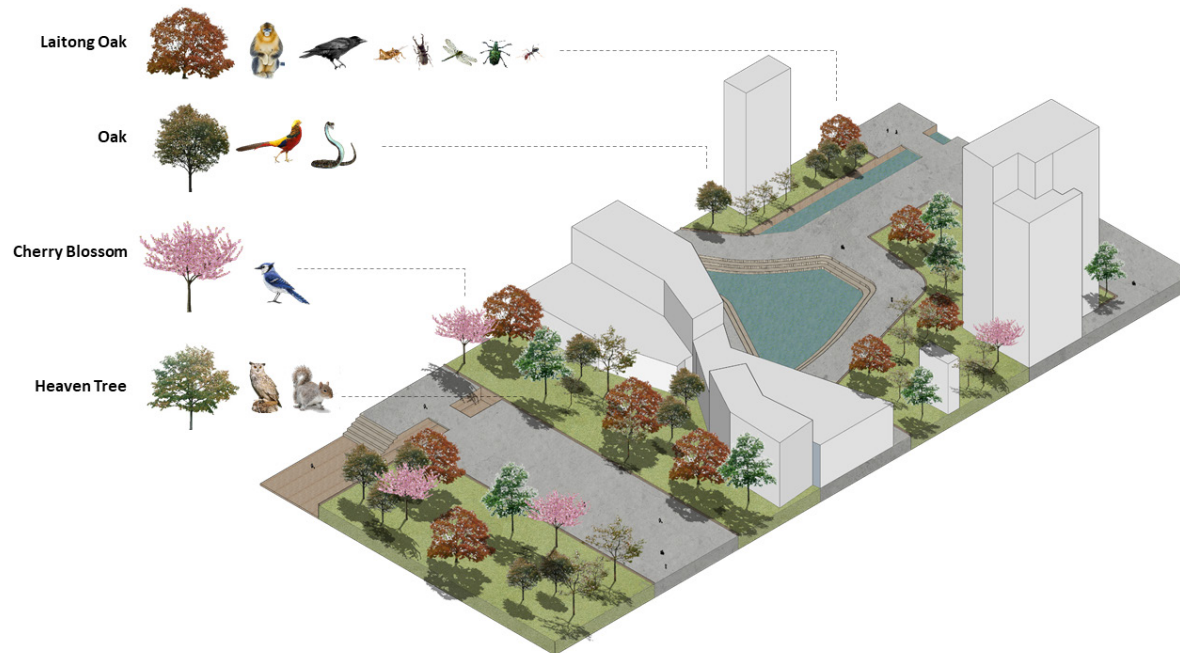
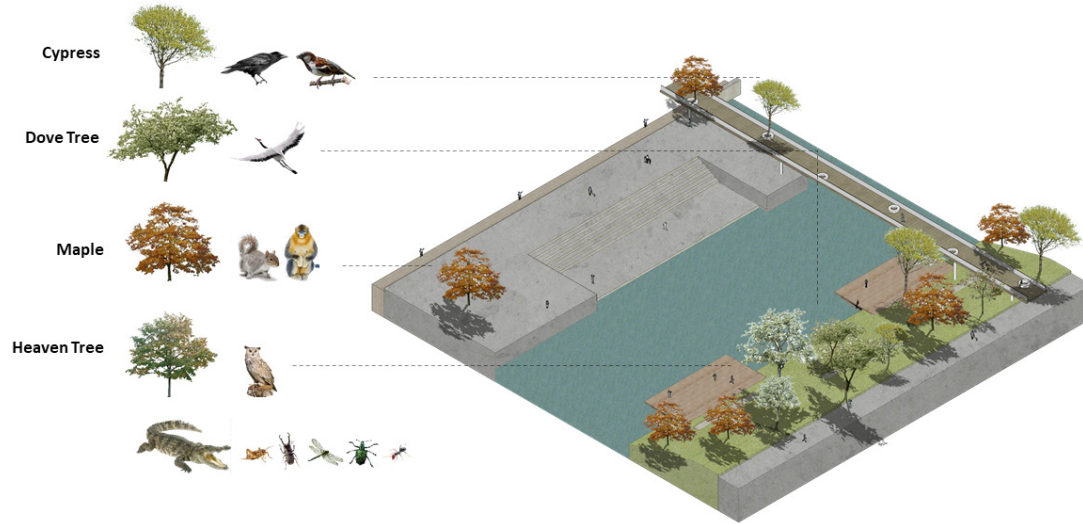
Green Infrastructure

Vegetation nodes



















Each node possesses their own local vegetation according to its location, and at the same time these vegetation attracts specific fauna; therefore the new creation of mini ecosystems.

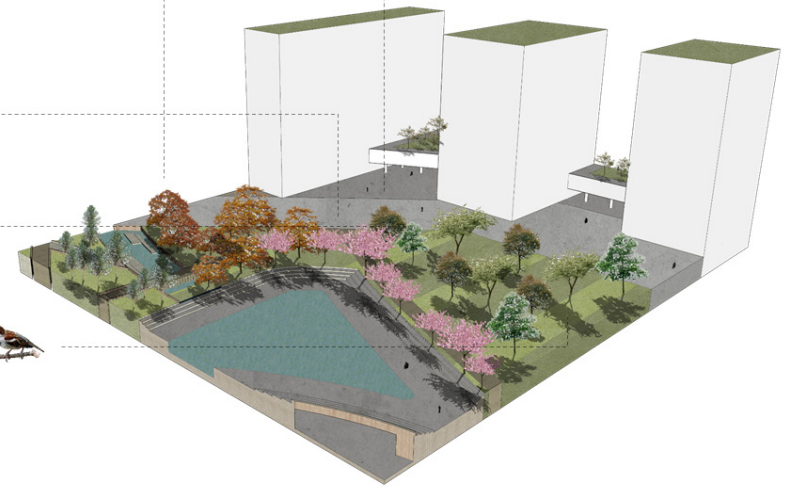
With this it also allows the creation of new spaces that are not longer there or have been changing through the years.

The main purpose of this project is to return the natural, sustainable chinese identity and to make the Beijing CBD a special spot for all the citizens.





- Laitong Oak      
- Oak   
- Cherry Blossom  
- Heaven Tree   
- Dove Tree    



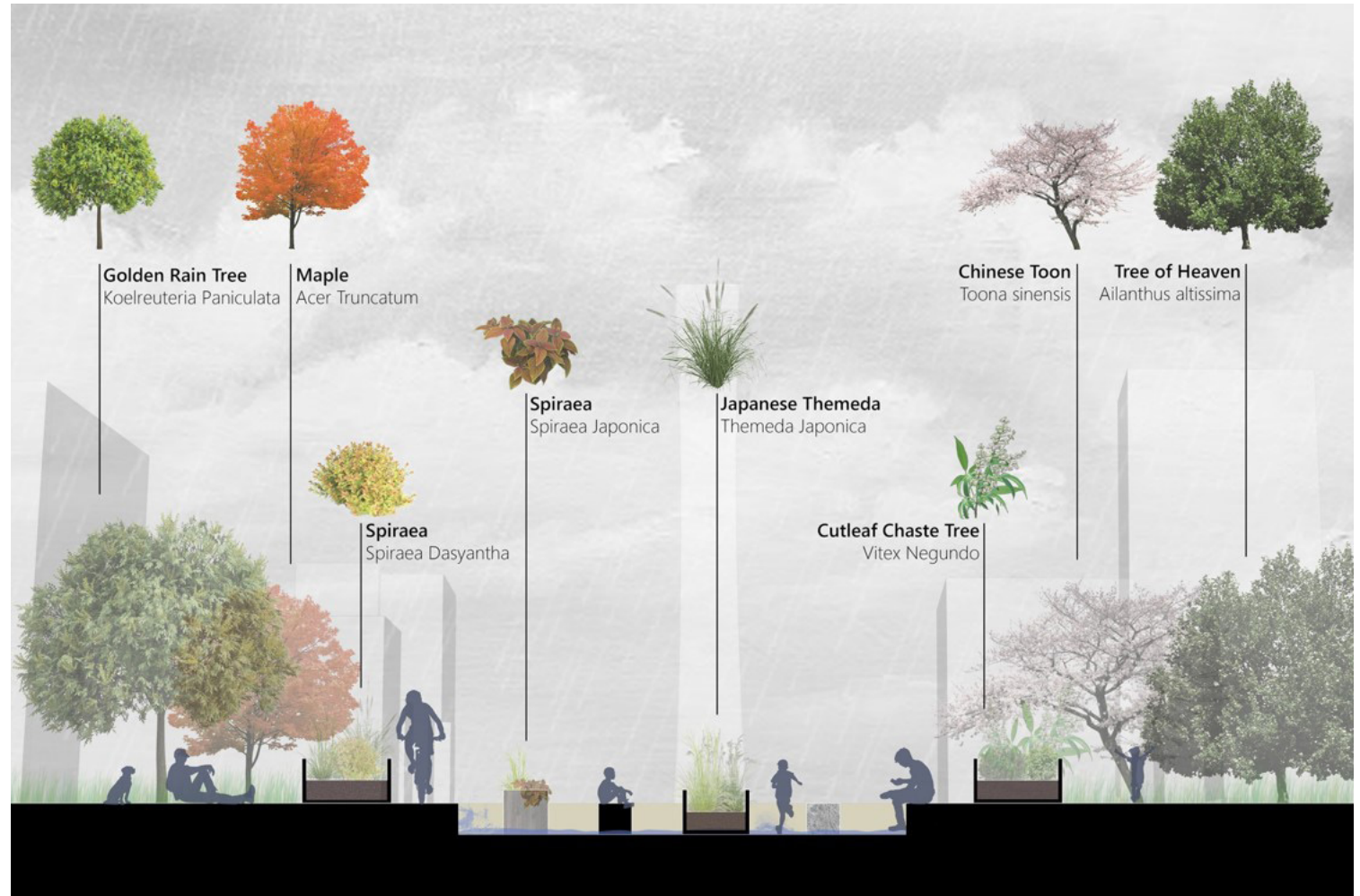
Urban Design of Guomao Central Business District, Beijing

Green infrastructure

Vegetation

In order to provide the best possible environments, the use of local trees and plants is considered. The water gardens act as a place of gathering for the people of the CBD. Within these gardens, the blue and green systems interact with each other.

The trees and plants used are based on the most predominant and native vegetation of Beijing area; to keep the easy maintenance and cost effective.

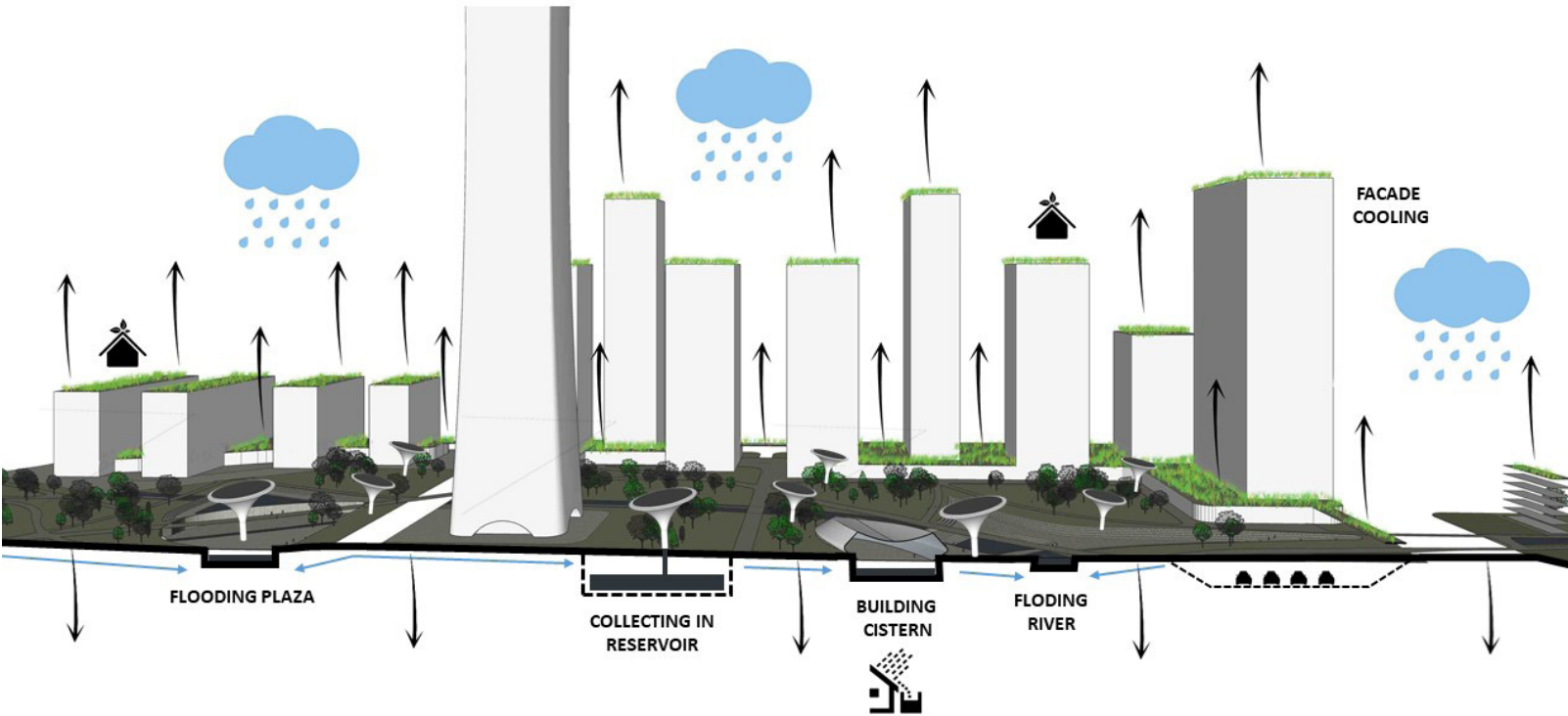


Green Infrastructure

Blue belt

For a better use of sustainability system, the site has been modified to maximize resources and water storage capacity. The purpose is using all these natural resources to feed all the local necessities in the CBD area.

The systems are as follows: Green roof system and vertical green facade are for temperature control and urban purposes; artificial trees that could store solar energy and will be used for electricity; flooding plazas for interactive and stormwater runoff collector; and natural green surfaces for temperature issues to reduce urban heat island effect.



Green Public Services

Community Courtyard

Relating to the history of Beijing city's community life, big courtyard is created for all communities in the CBD area as the concept for sharing public services.

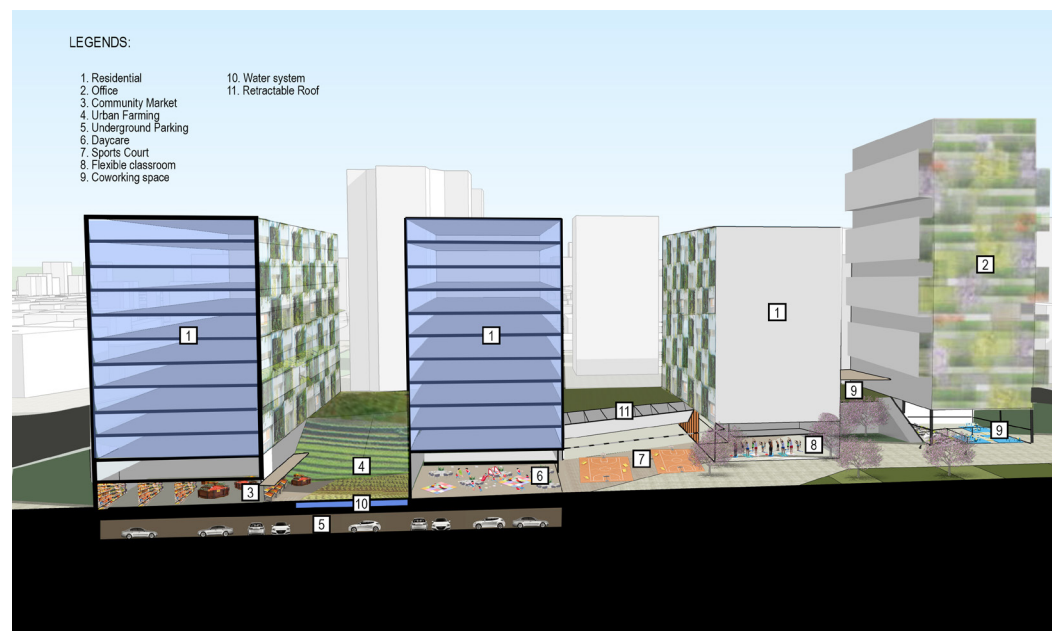
The green system is not only on the ground level, but it also continues to the vertical façade of the building. In addition, the specific public service that mostly for residential community are located on the podium and ground level to create connection for the public services inside the building to the outside green spine. It makes a seamless connection by open up the ground floor while still maintaining the public and semi-private space.

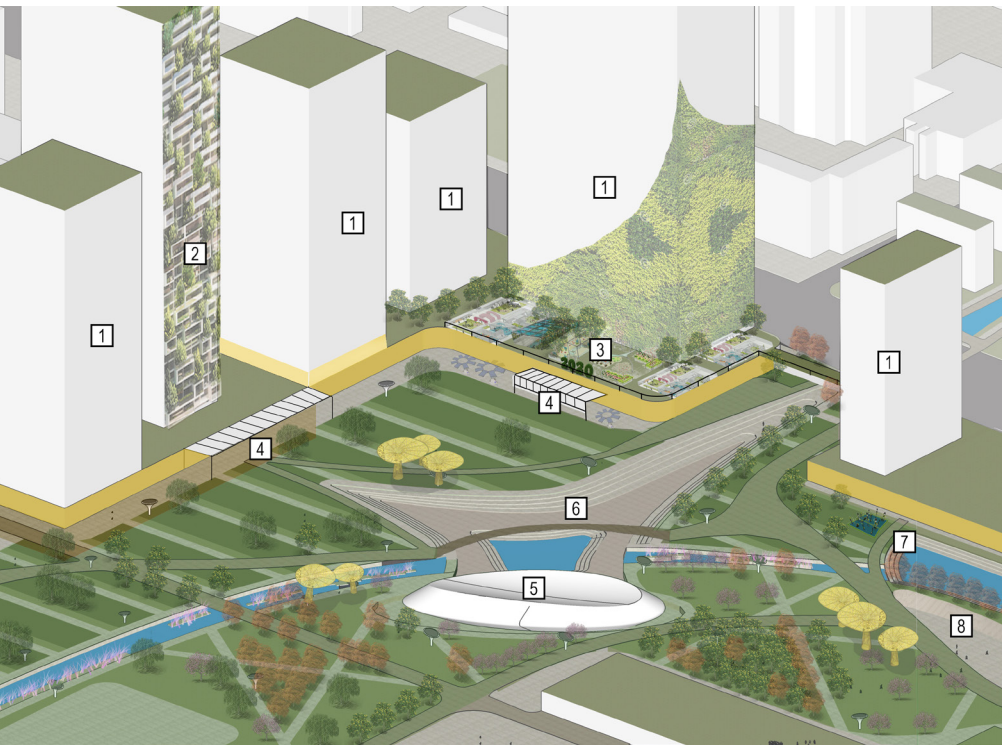


Legends:

- community market
- urban farming
- daycare
- sports court
- flexible classroom
- coworking space

1. playground / water plaza
2. solar tree
3. canopy
4. subway entrance plaza





Legends:

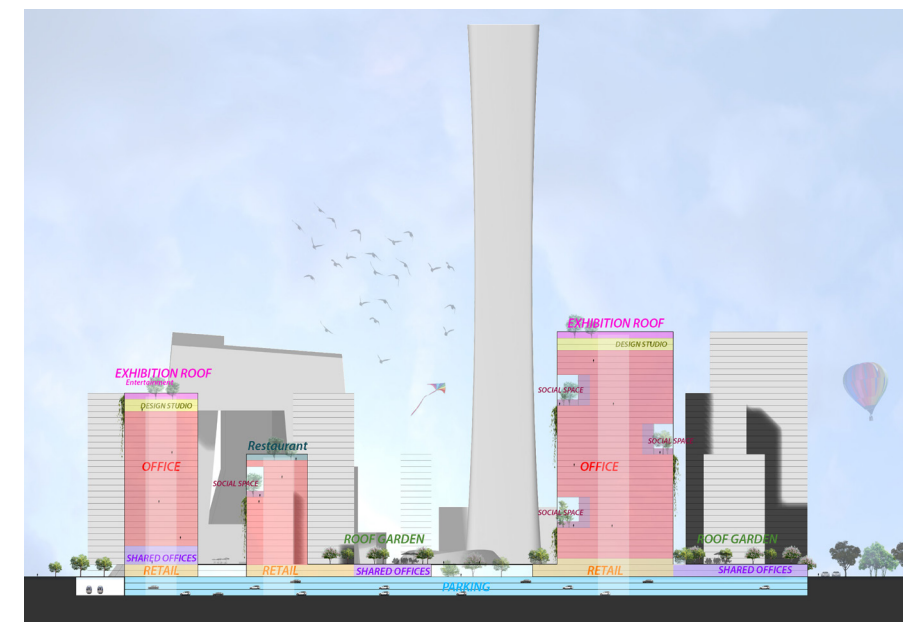
- Basement parking
 - Retail
 - Dining
1. Office
 2. Residential
 3. Rooftop garden
 4. Retractable seating area
 5. Art gallery & library
 6. Amphitheater / water plaza
 7. Outdoor fitness / water plaza
 8. Subway entrance

Green Public Services

Active Frontage

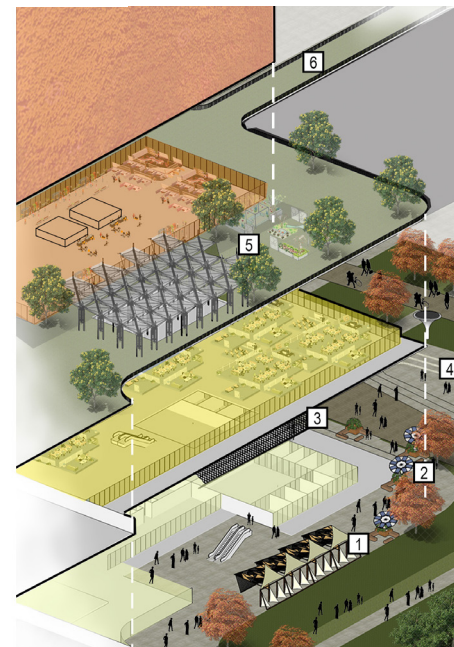
Putting the retail on the ground floor to open up for the public and create active frontage for this area that could invite other communities other than the workers.

The zoning concept for this area are gradation for each level from the most public (like retails) on ground level to semi-public (for coworking space) to private on the office tower.



Legends:

- retail
 - coworking space
 - office lobby
 - office tower
1. movable retails
 2. outdoor seating
 3. retractable facade
 4. plaza
 5. rooftop garden
 6. connector bridge

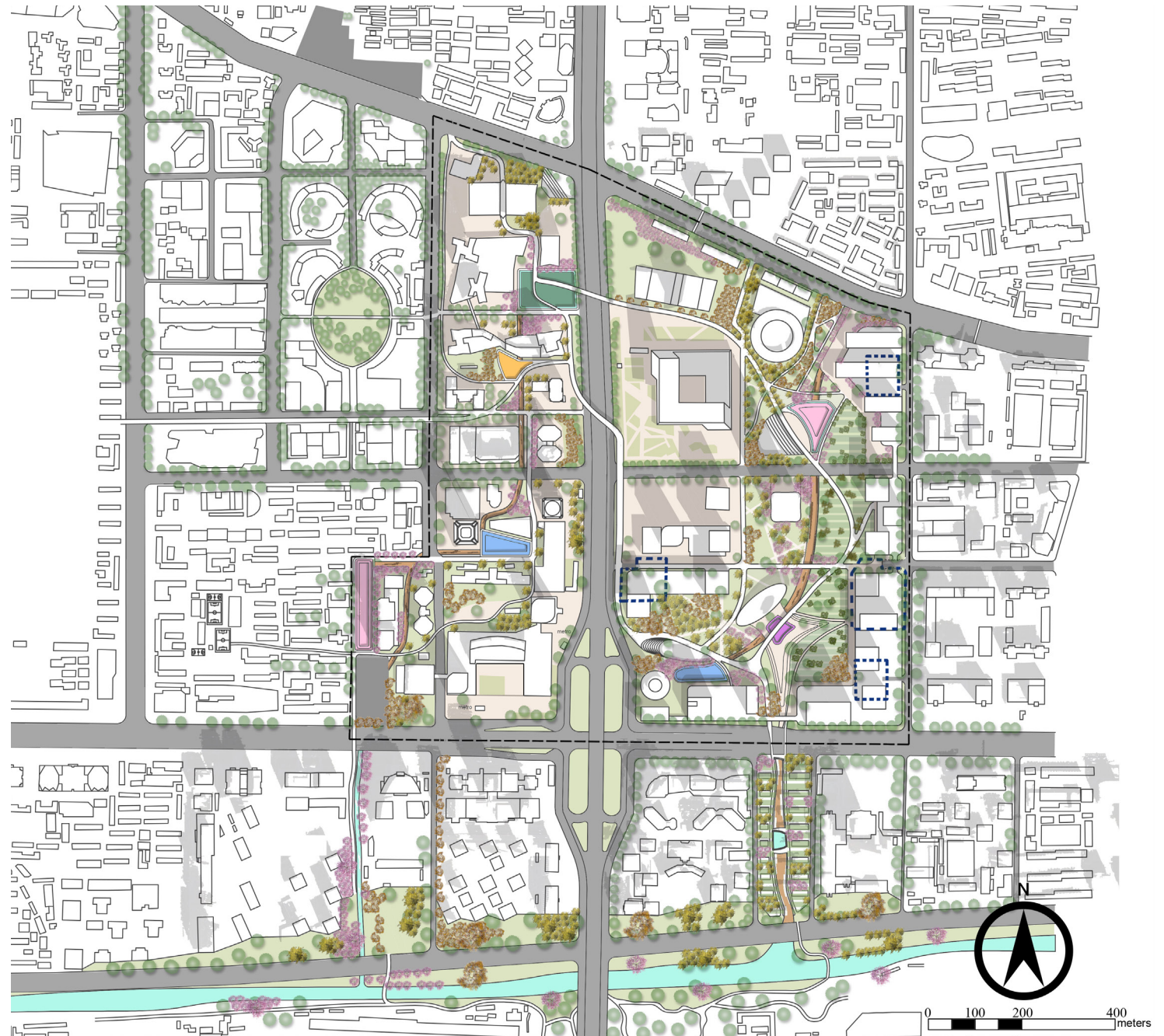


Conclusion

Future Public Services

Our vision of what the future CBD could look like; transforming the functions so that they are integrated into all communities, also connecting buildings and nature, nature with nature, and creates a unique local identity for the area.

The design is not only aesthetically better than the current design, it is far more eco-friendly, sustainable and in an age where we may have to rethink how we use spaces. This new green-blue system as public services could be a symbol of modern China and its cultural revolution for the coming generations.



Before



After



Urban Design of Guomao Central Business District, Beijing