

ARCHITECTURE AND URBAN DESIGN PROJECTS

· Baiyun Lake Digital Sci-tech City

Urban Planning and Design

3rd Prize

Guangzhou, China

08/2019

· Space Ordered

Architecture Concept Competition

3rd Prize

Chengdu, China

09/2019

· Xi'an Yan Ji You Bookstore Complex

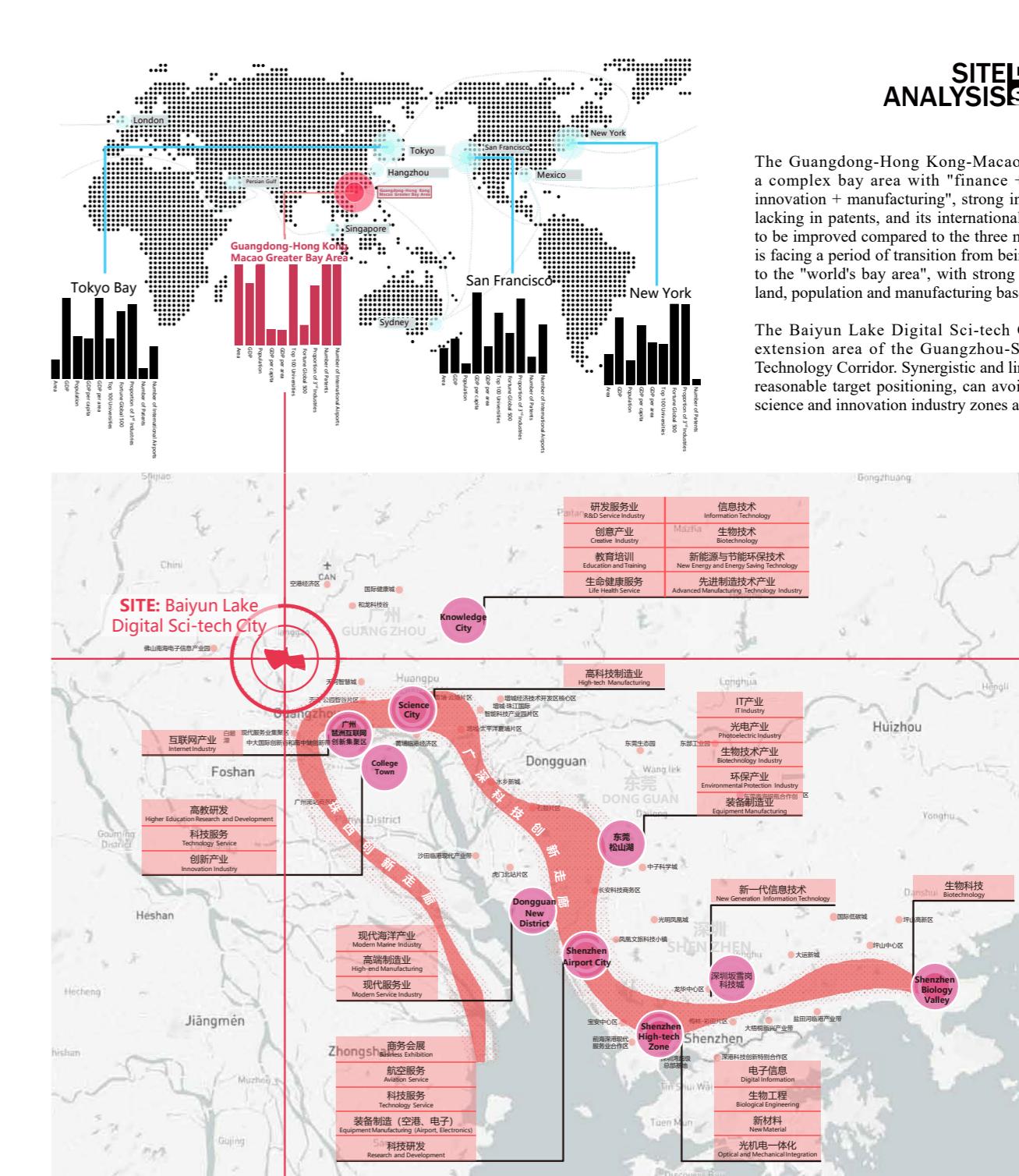
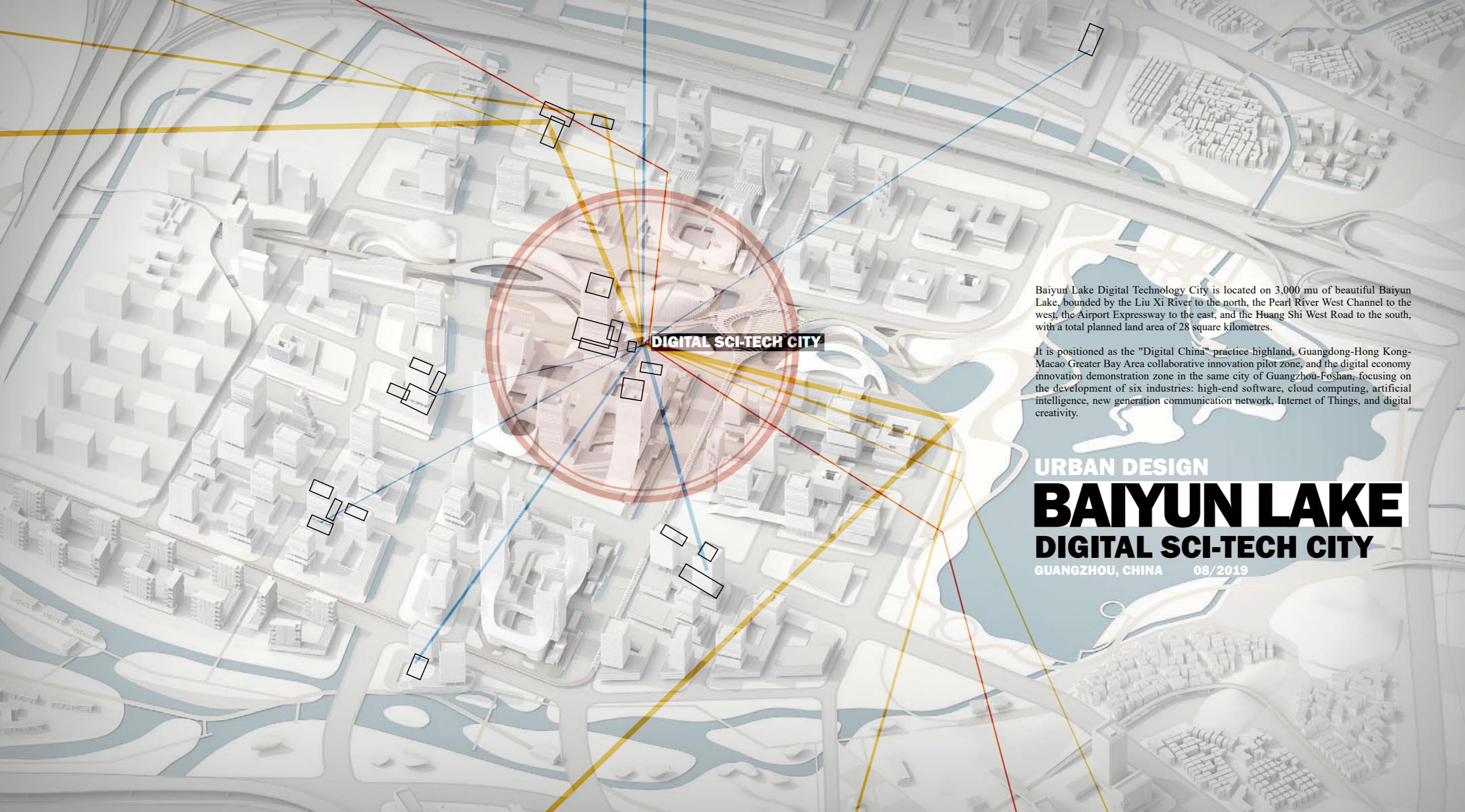
Renovation and Design

Architecture Renovation and Design

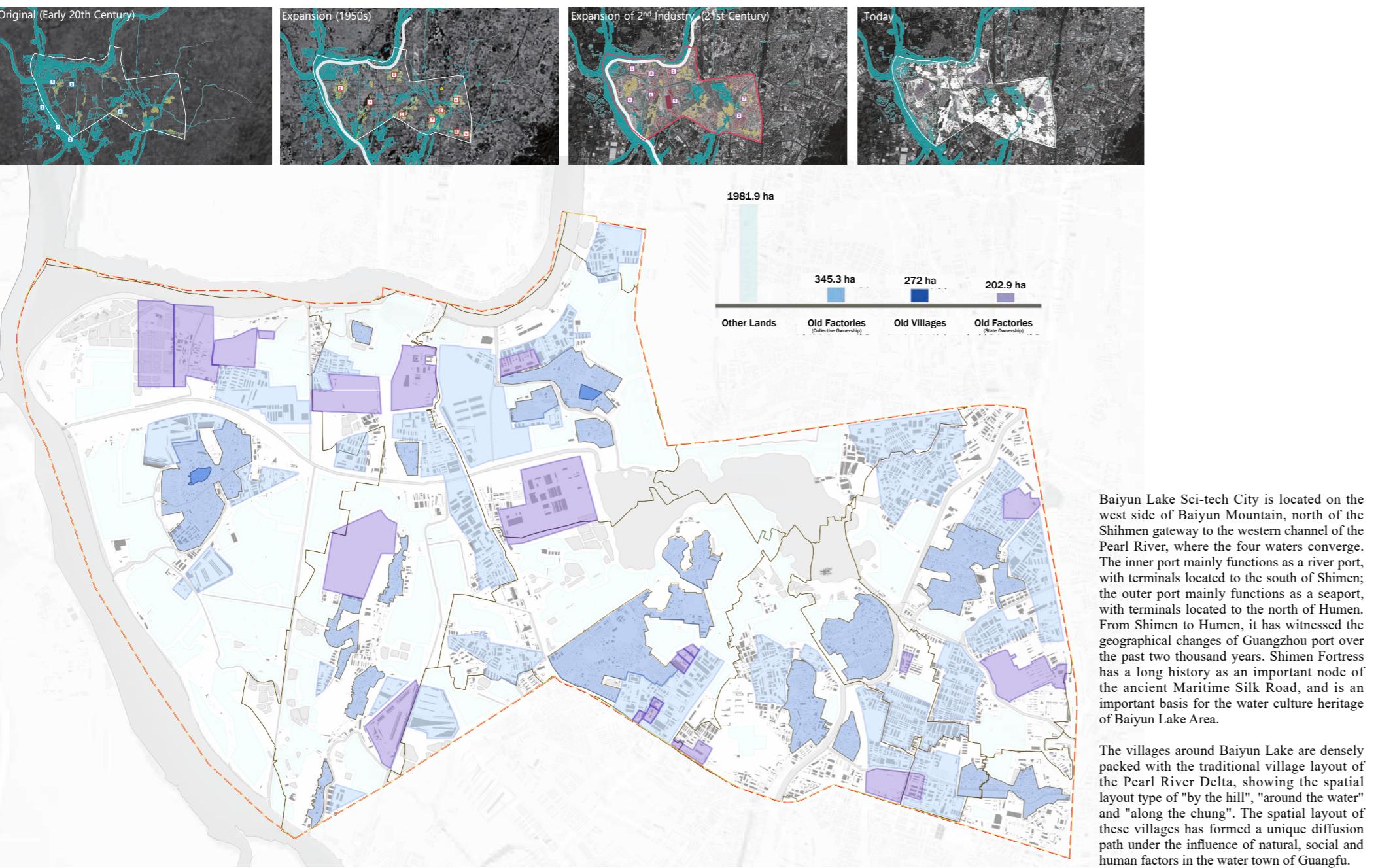
Bid Winner

Xi'an, China

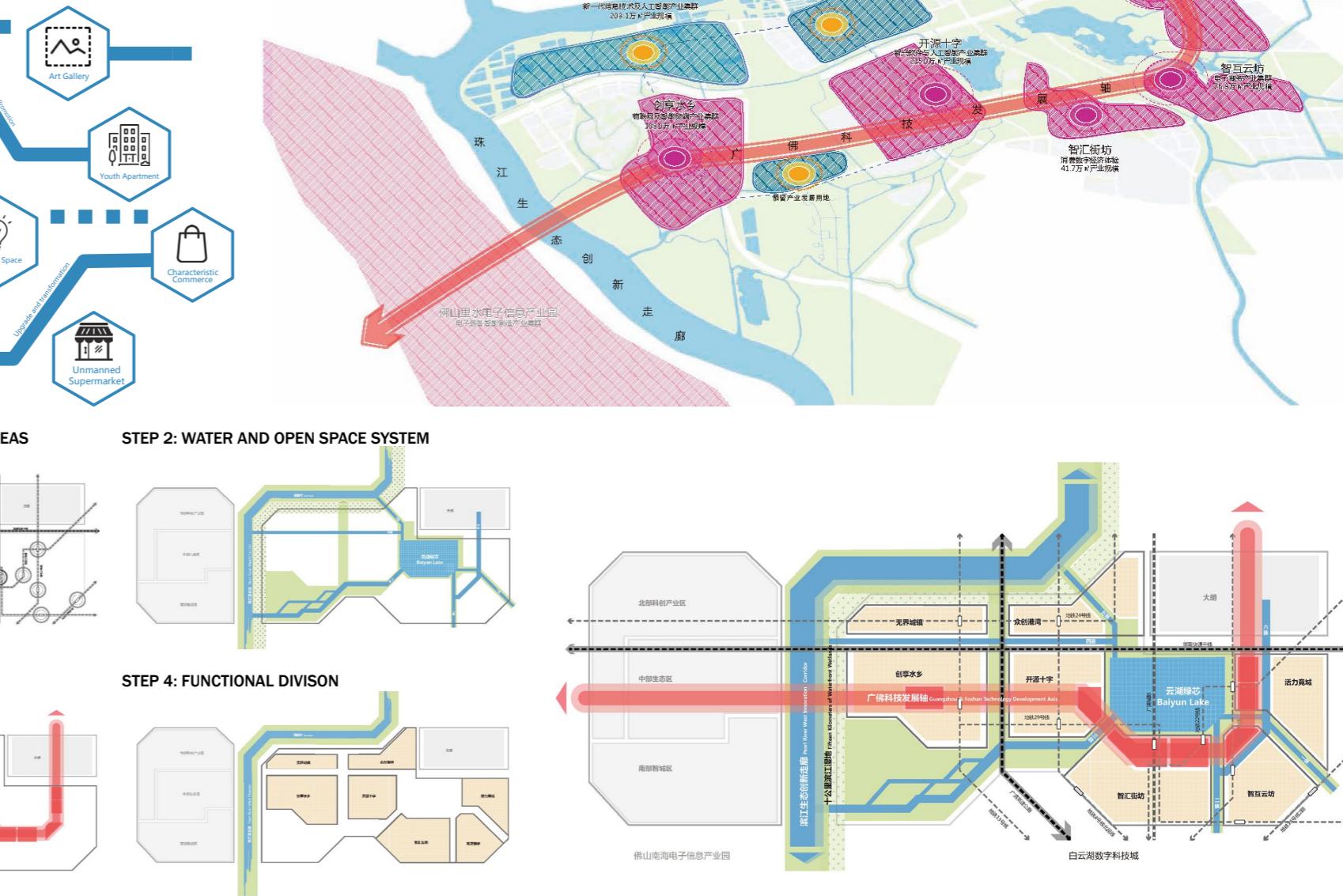
07/2019

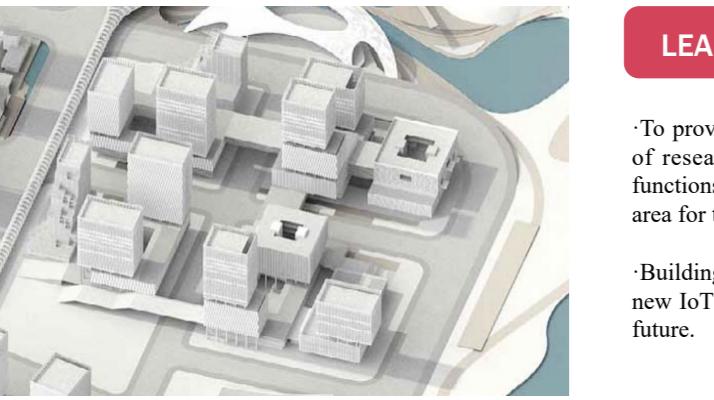


DIGITAL HISTORICAL SCI-TECH CITY EVOLUTION



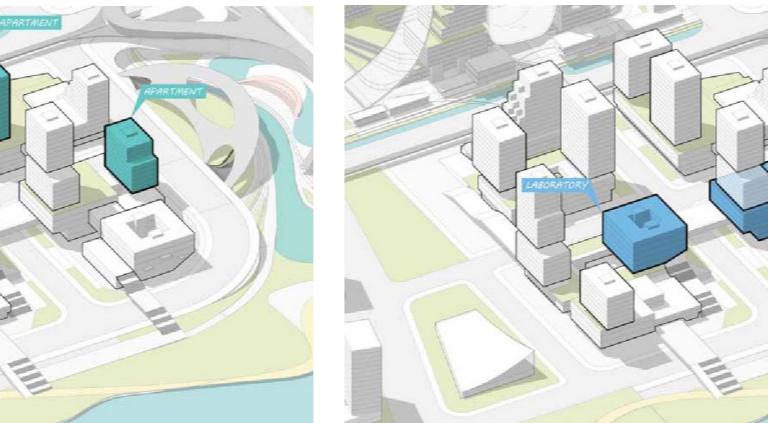
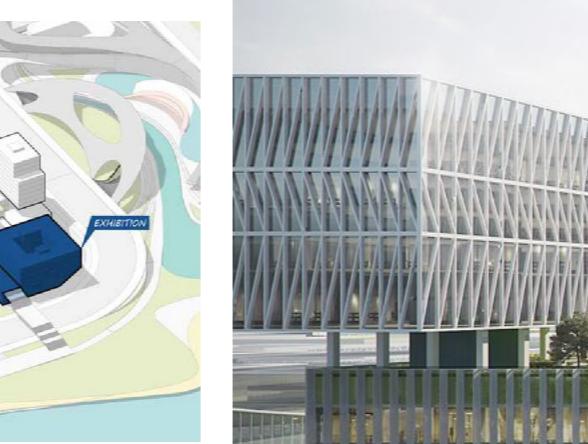
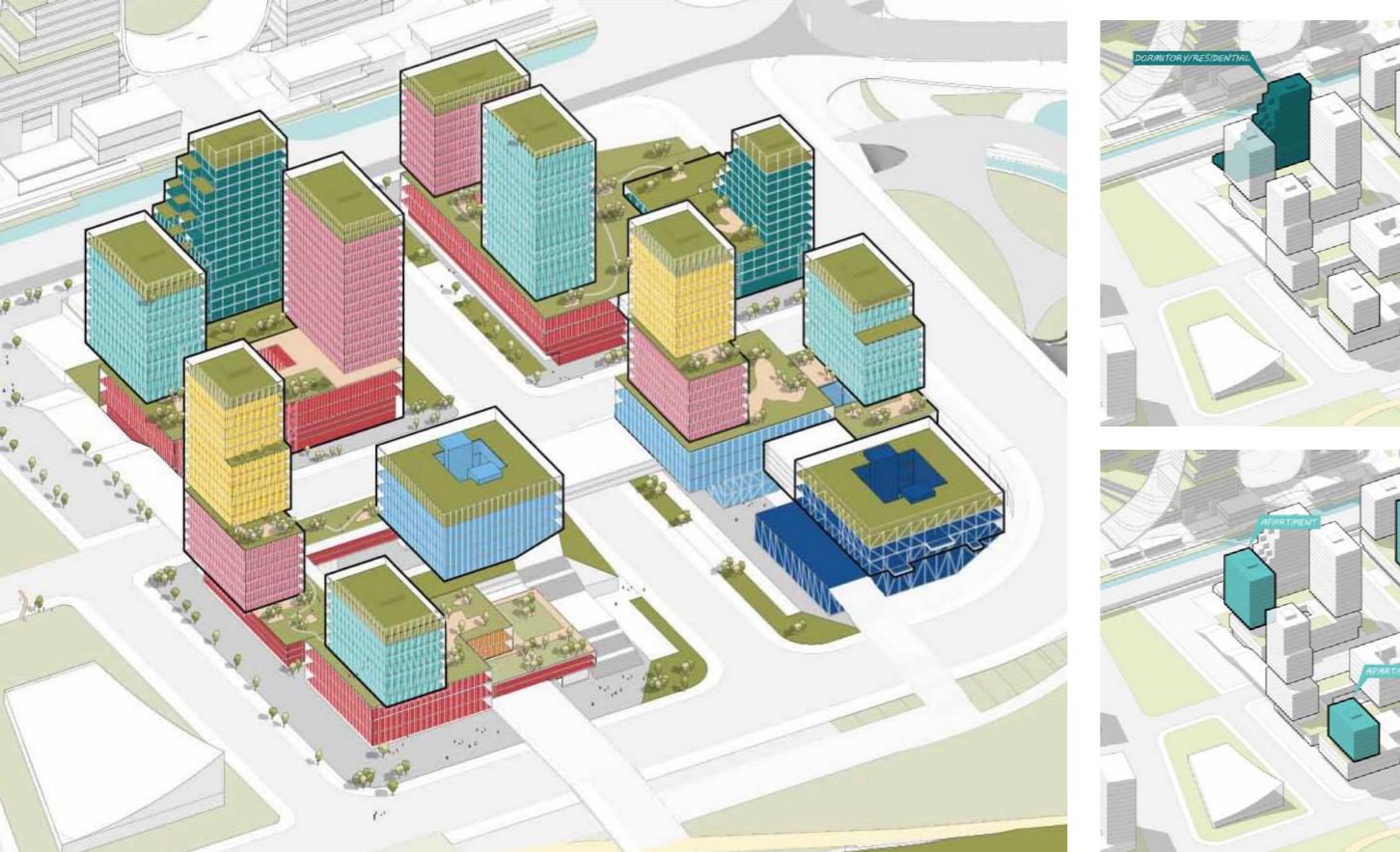
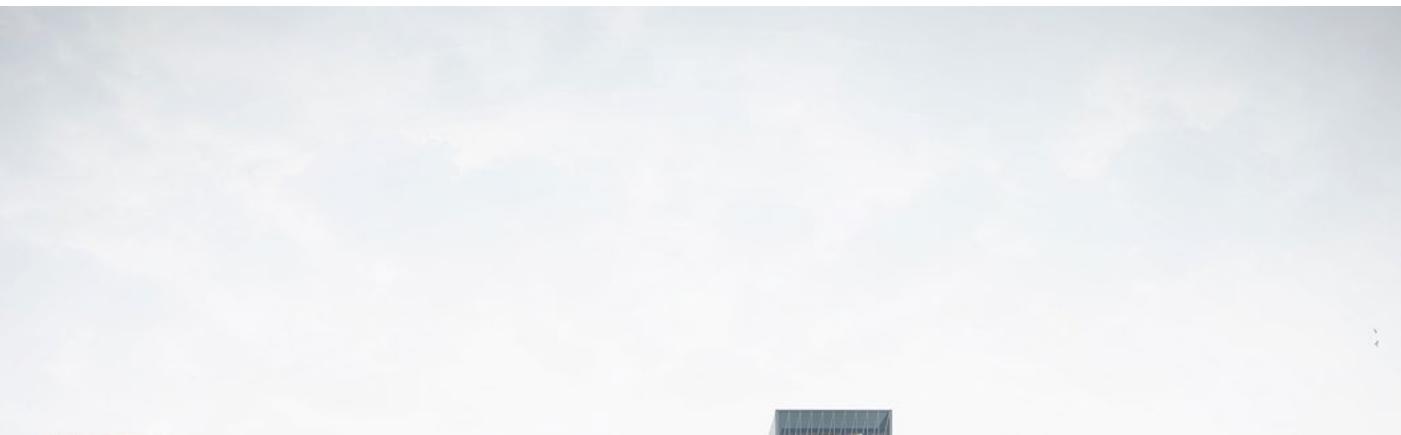
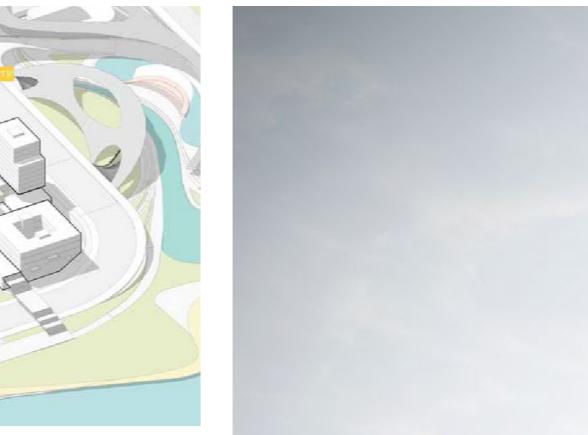
The plan proposes seven industrial clusters, each of which will host the leading new-generation information technology and artificial intelligence industry, next-generation communication network industry, Internet of Things and intelligent terminal industry, software and artificial intelligence industry, consumer digital economy experience industry, e-commerce industry, digital culture industry and other industrial space, with a total of about 10.96 million square metres of industrial carrier space implemented.

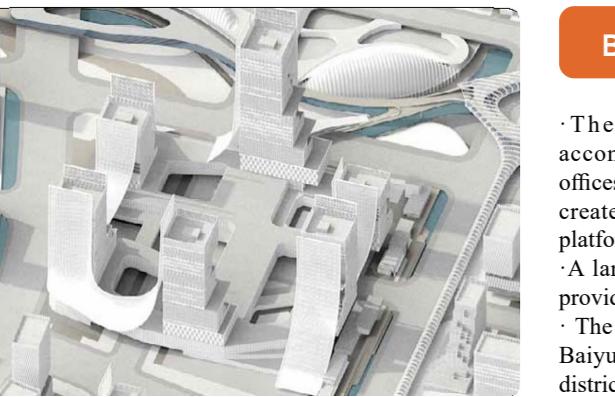




LEADING ENTERPRISES ZONE

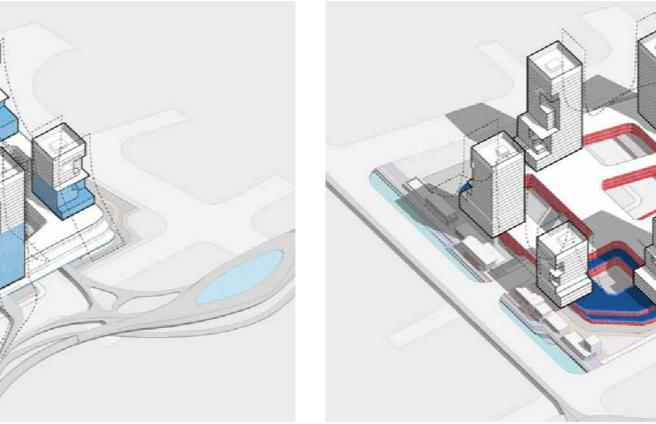
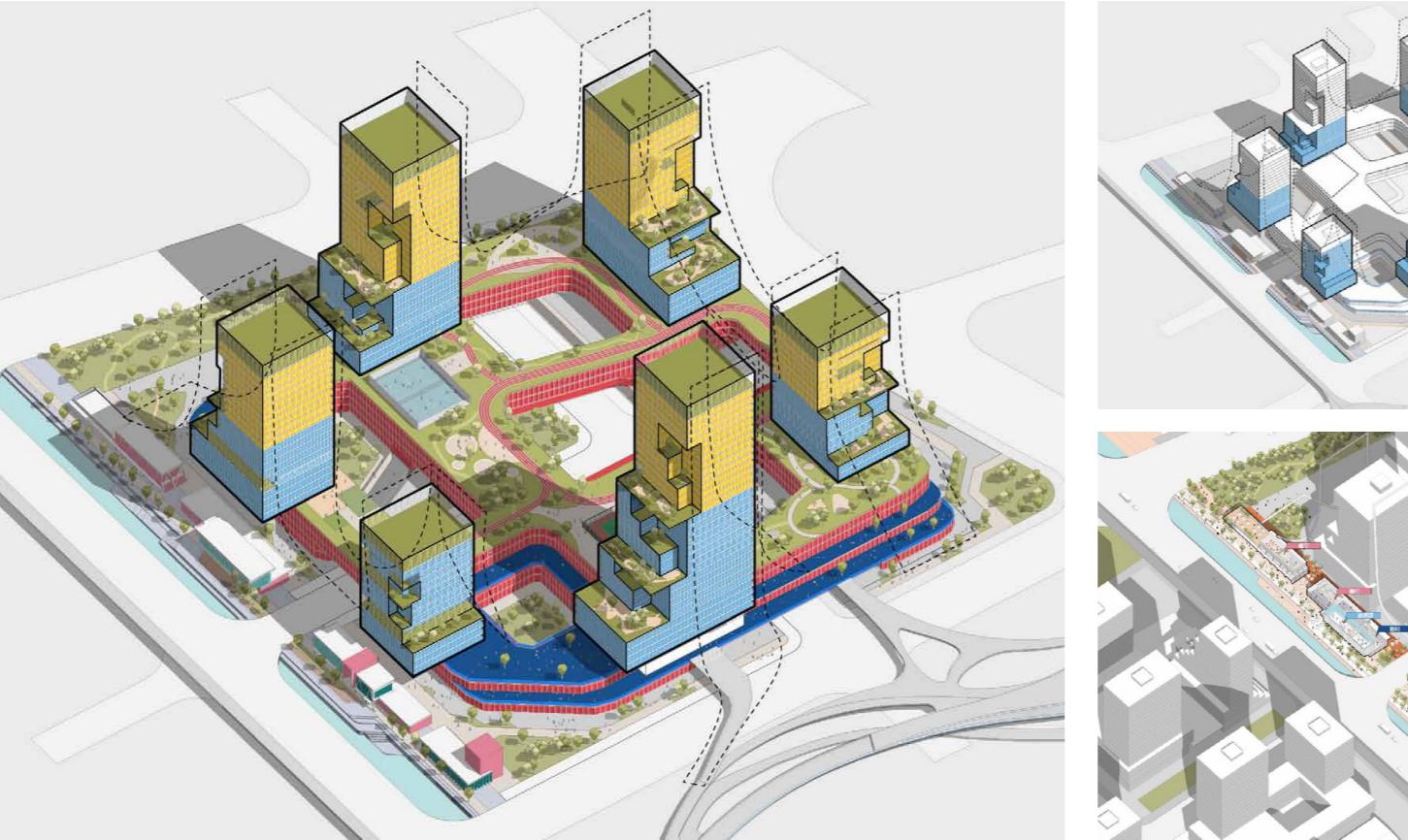
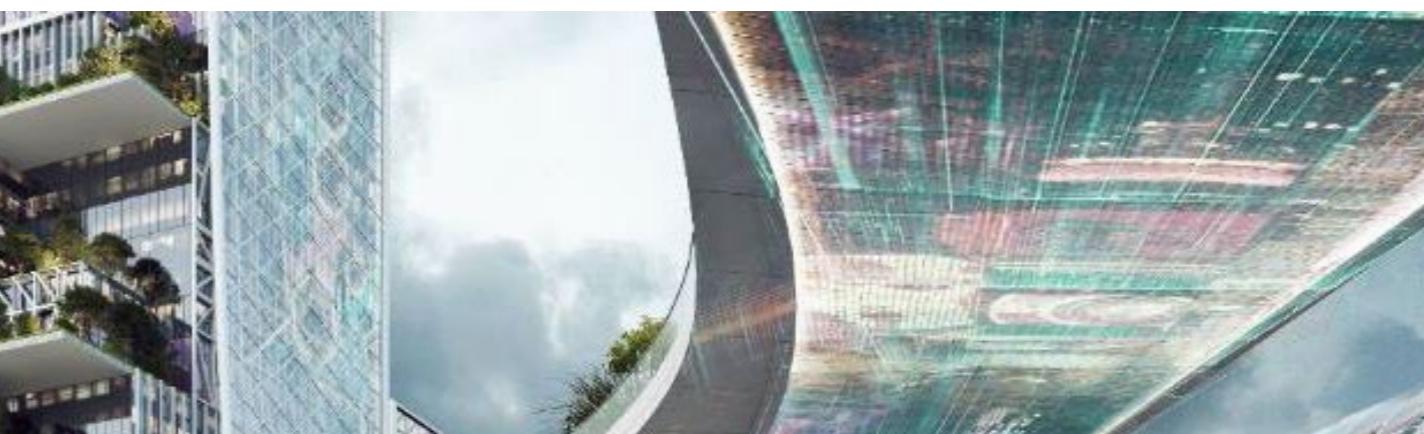
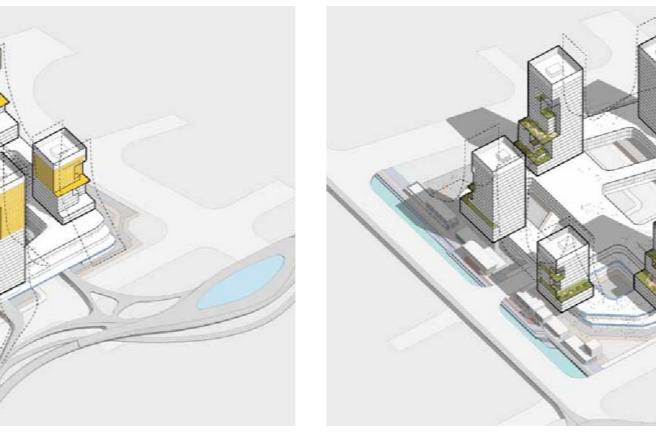
- To provide leading companies with a full range of research, living, hospitality and exhibition functions, as well as an innovative experimental area for the public.
- Building an unmanned logistics base to create a new IoT working and living environment for the future.





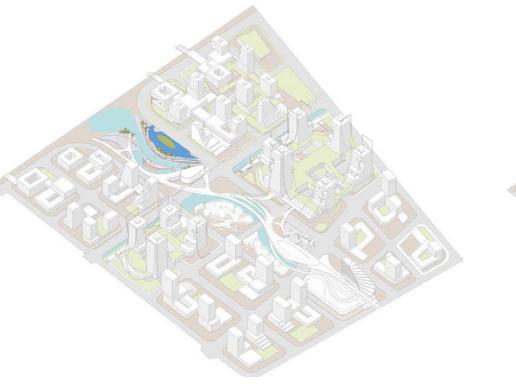
BUSINESS & COMMERCIAL ZONE

- The main function is to support industry, accommodating finance, legal affairs, headquarter offices, large shopping centres, hotels and flats, and to create a continuous commercial space through large platforms.
- A large amount of three-dimensional green space is provided, creating plenty of space for interaction.
- The flowing façade dynamically echoes the water of Baiyun Lake, creating an impressive landmark in the district.



DIGITAL OPEN SPACE
SCI-TECH CITY DESIGN

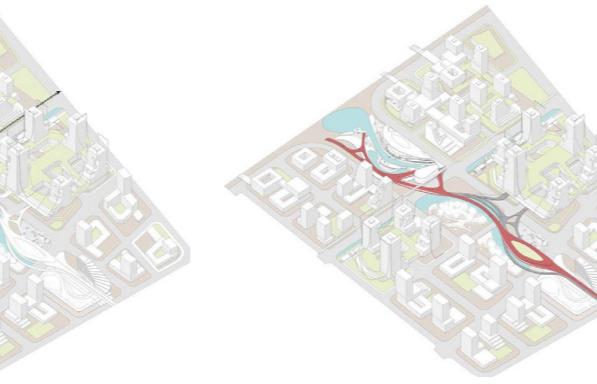
CULTURE CENTRE



BOTANICAL GARDEN



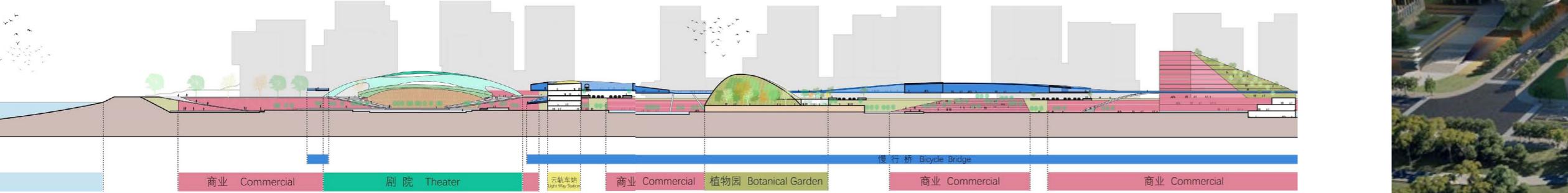
LIGHT WAY



WALKING BRIDGE

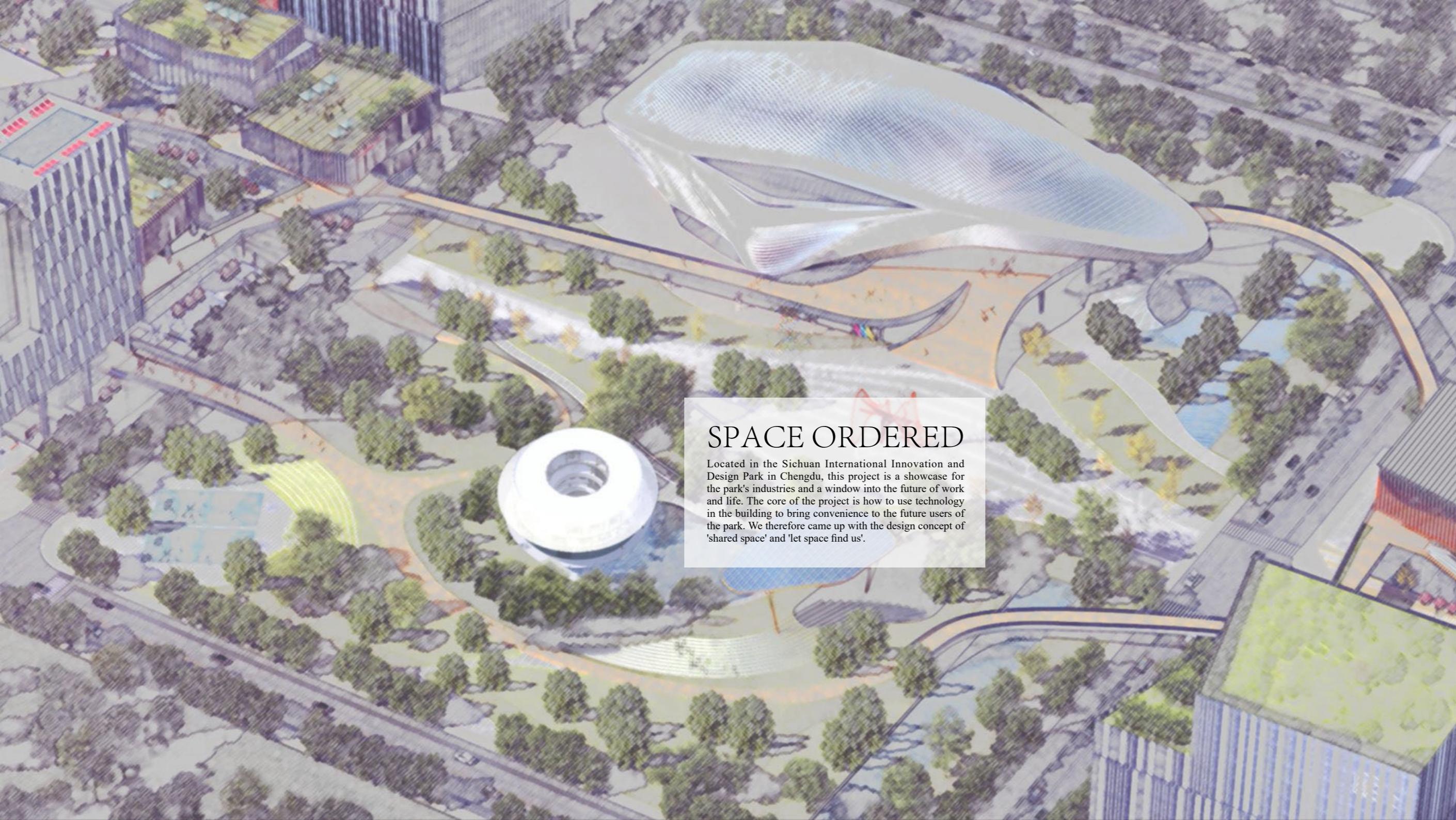


SECTIONAL VIEW OF OPEN SPACE



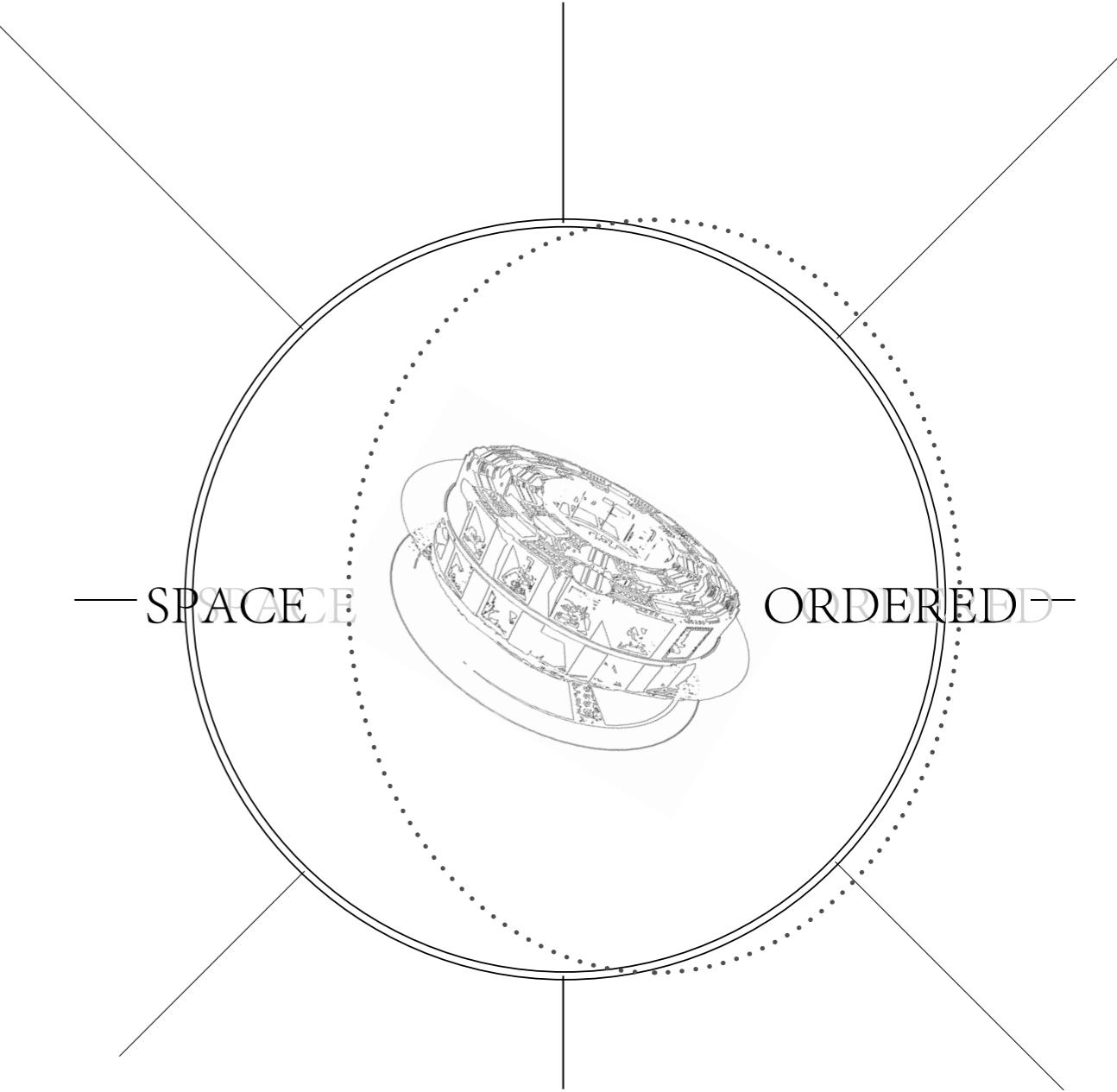
The east-west axis of ecological vitality has been designed to link the waterfront of Baiyun Lake, integrate the ground and underground, and create a borderless experience space. The axis integrates a series of public spaces and facilities such as a three-dimensional bicycle and pedestrian corridor, a large Lingnan three-dimensional botanical garden, an underground garden, an underground commercial street, a cloud rail platform, a performing arts stage, a regional cultural centre and a lakeside water plaza, linking the green space of the area to create a shared activity centre for all groups in the district.





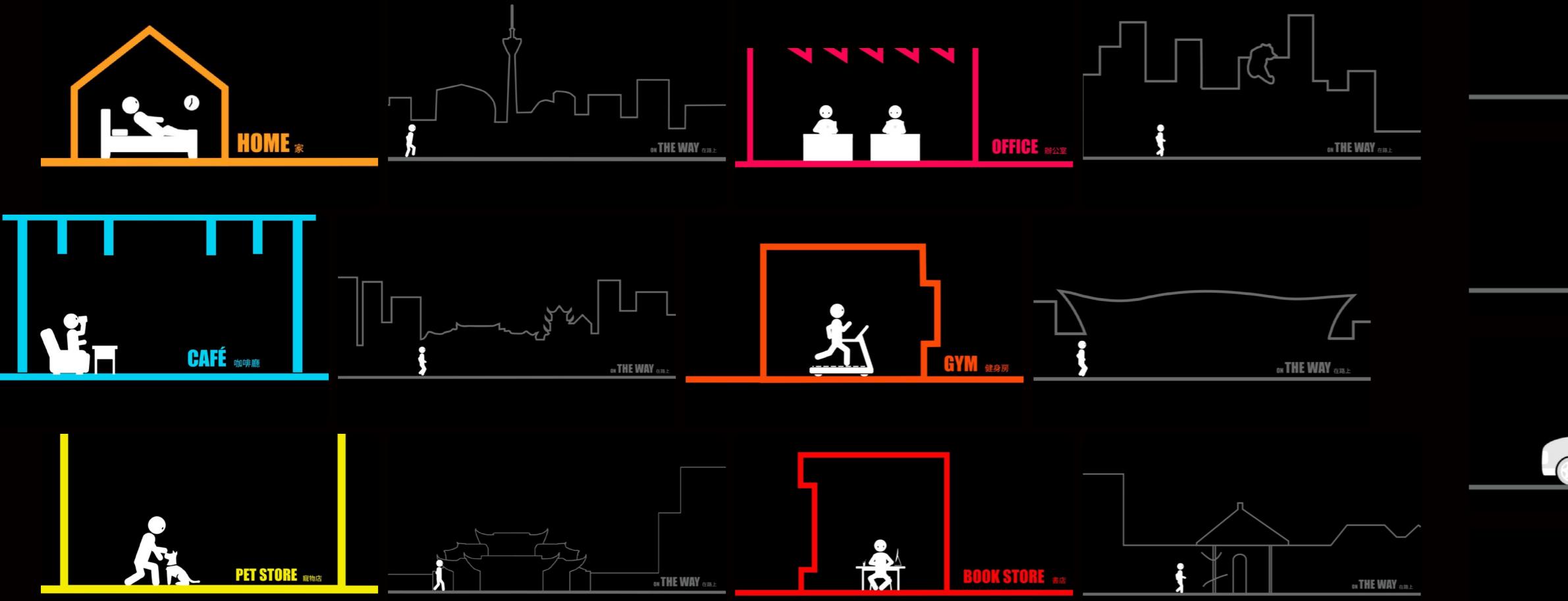
SPACE ORDERED

Located in the Sichuan International Innovation and Design Park in Chengdu, this project is a showcase for the park's industries and a window into the future of work and life. The core of the project is how to use technology in the building to bring convenience to the future users of the park. We therefore came up with the design concept of 'shared space' and 'let space find us'.



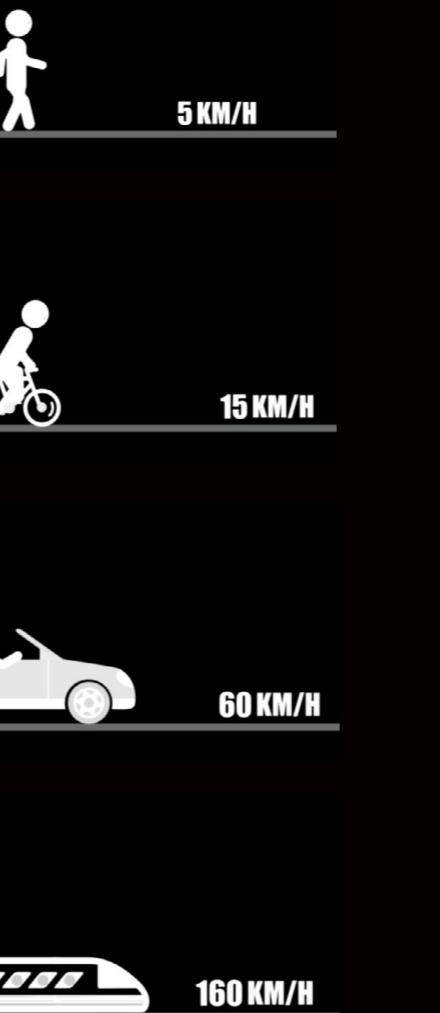
CHENGDU, CHINA
09/2019

WE ALL LOVE TO HAVE FUN,
BUT WE ARE ALWAYS ON THE WAY:



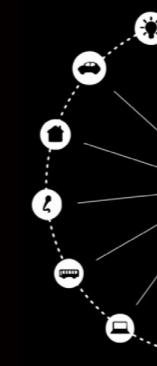
HOW COULD WE HAVE DIFFERENT SPACES,
AND ALSO SAVE TIME?

WE COULD USE FASTER
TRANSPORTATIONS.

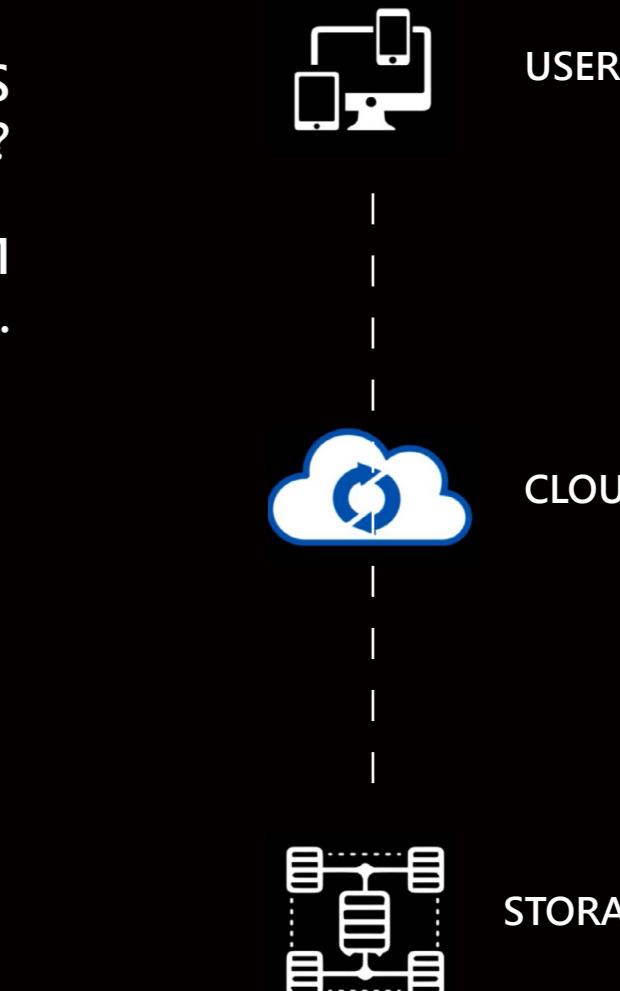


OR, COULD SPACES
COME TO US INSTEAD ?

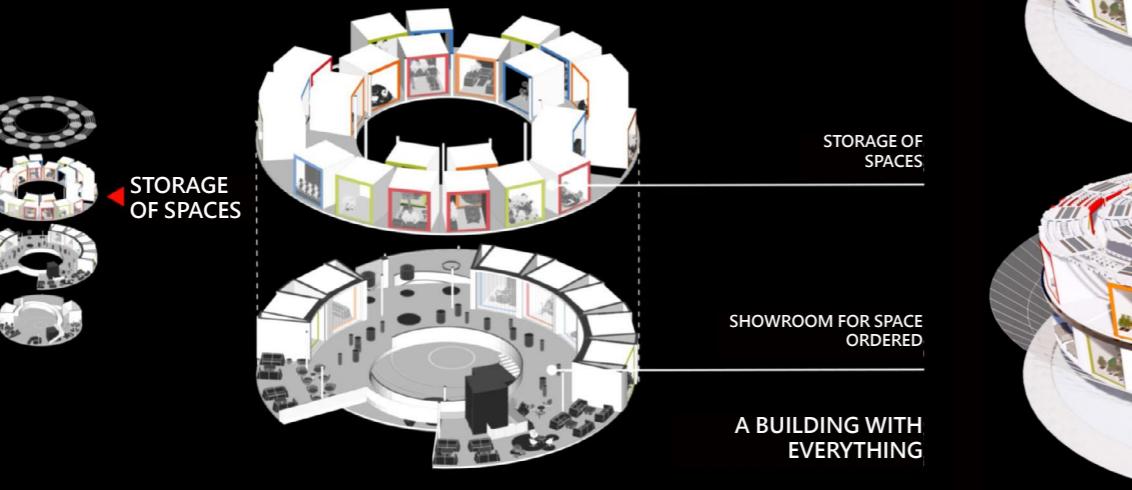
WE ARE INSPIRED FROM
OTHER TECHNOLOGIES.



AS WE STORE DATA IN
THE CLOUD.



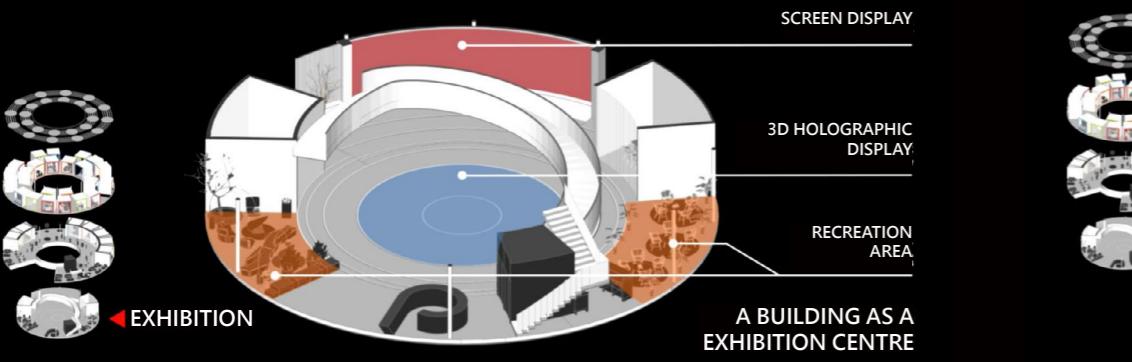
WE CAN STORE DIFFERENT SPACES IN THE CLOUD, AND RETRIEVE WHAT WE WANT:



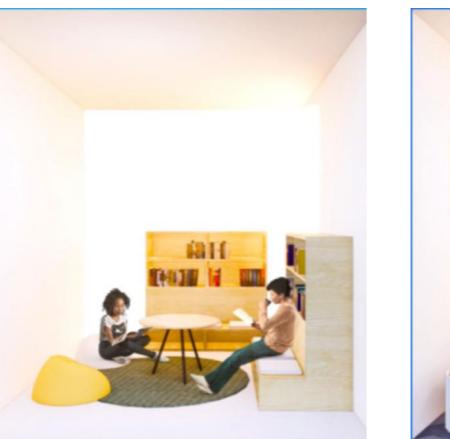
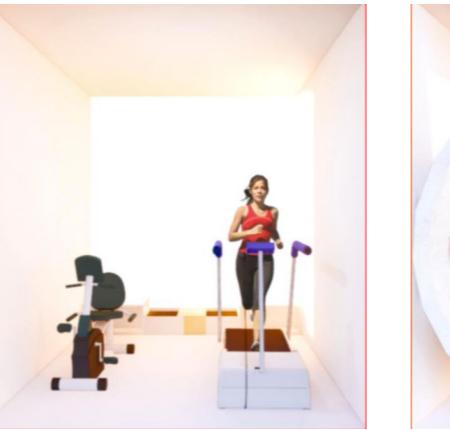
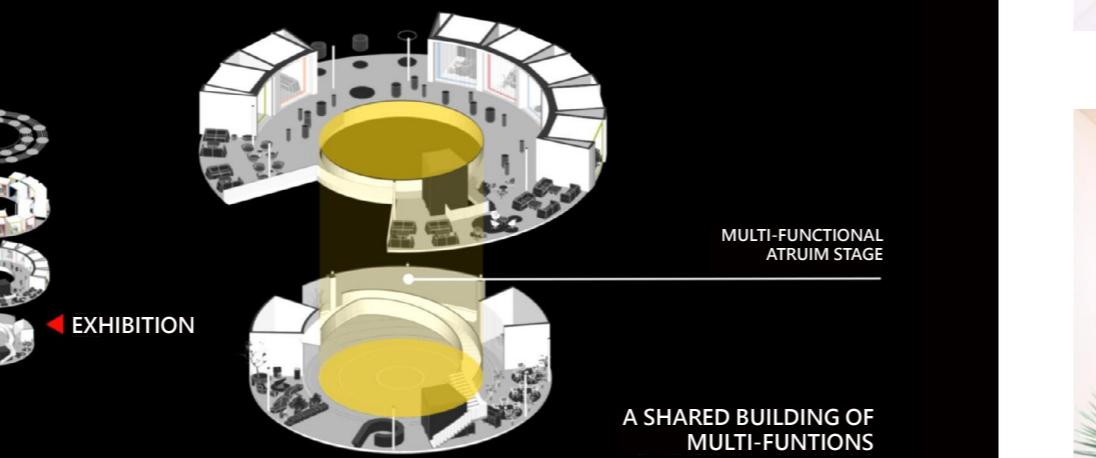
STOREAGE

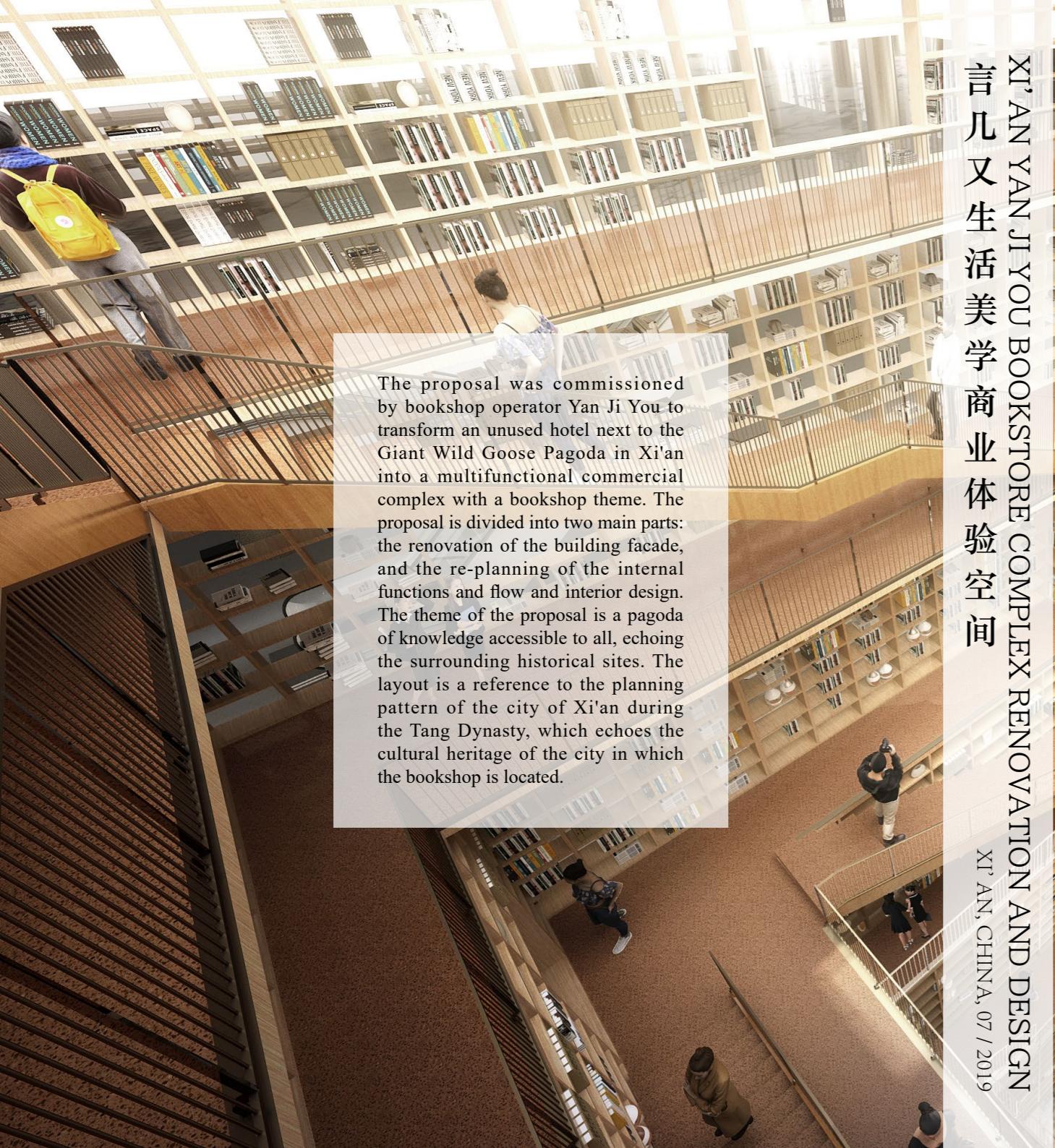
RETRIEVAL

IT IS A EXHIBITION CENTRE WITH MULTI-FUNCTIONS AS WELL:



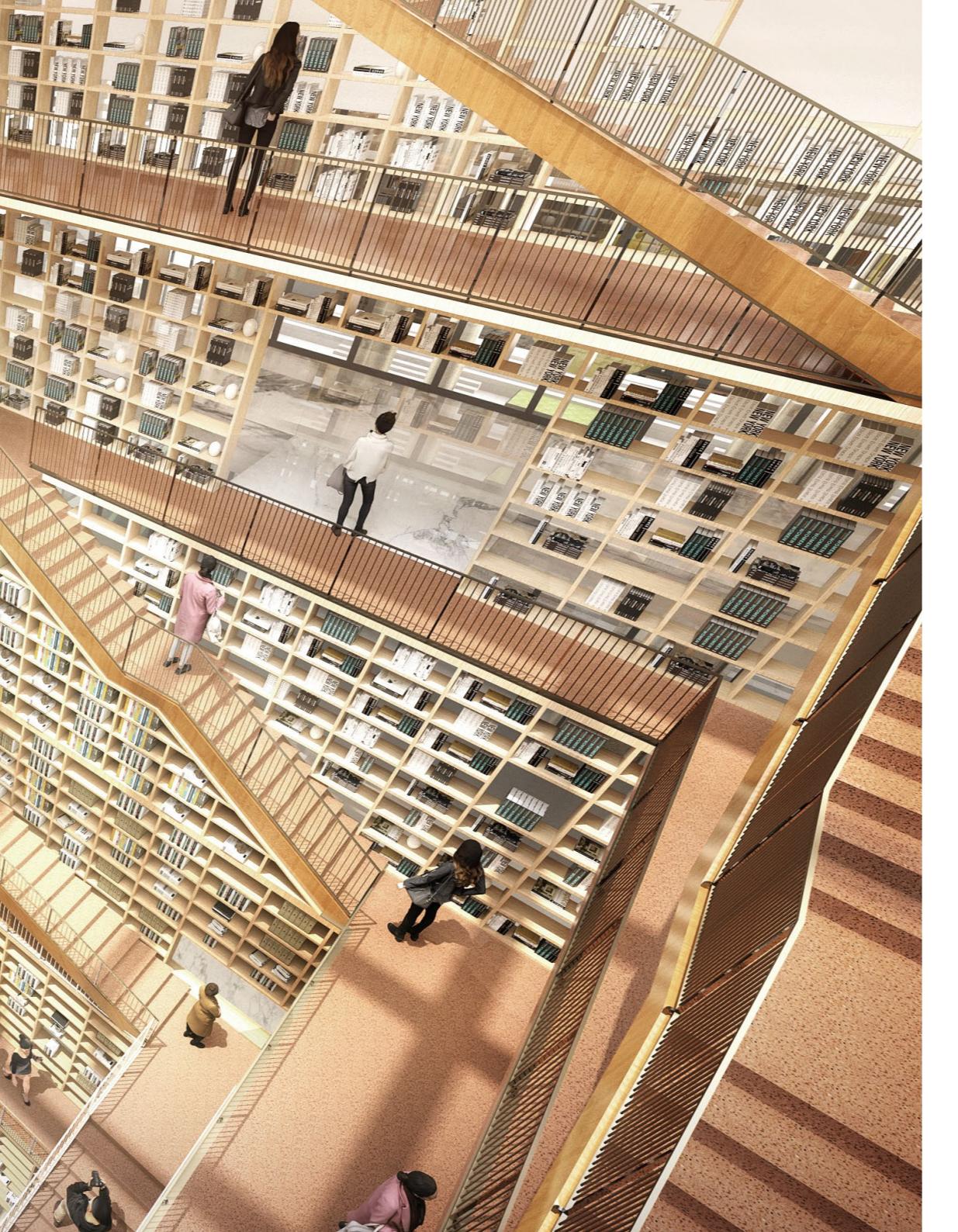
A BUILDING AS A EXHIBITION CENTRE





A person wearing a dark jacket and light-colored pants stands on a wooden platform, taking a photograph of a tall, multi-tiered wooden bookshelf. The shelves are filled with books, and the structure is supported by wooden beams and ladders. The floor is made of wood, and there are other bookshelves visible in the background.

A person wearing a blue jacket and dark pants stands on a wooden ramp inside a large wooden structure, possibly a spiral staircase or a series of ramps. The ramp has a metal railing and leads up through several levels of wooden steps.



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Fig. 1. A photograph of the experimental setup.



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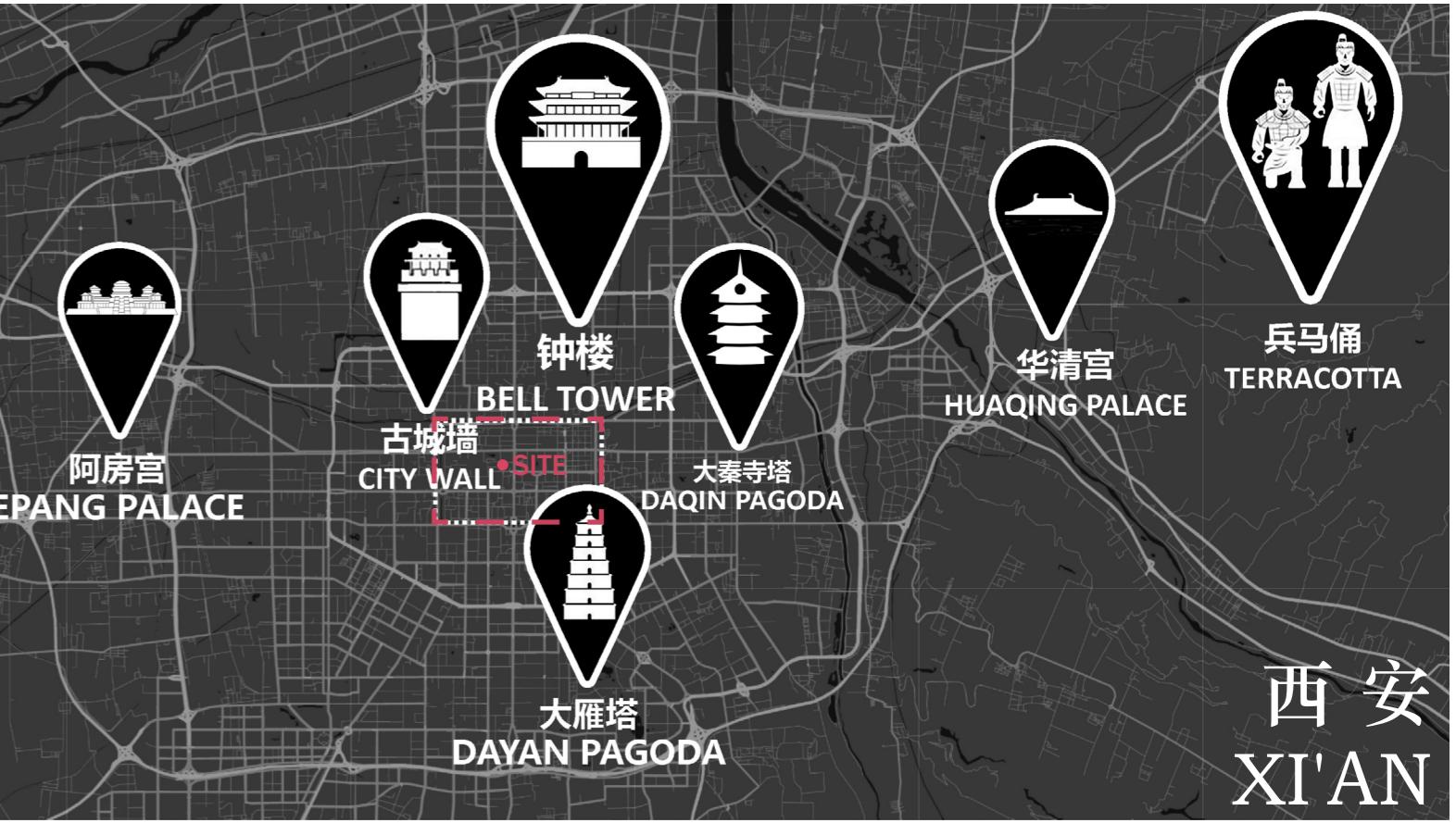
LOCATION ANALYSIS

Xi'an is one of the oldest cities in China and the oldest of the four ancient capitals, having held a place in several of the most important dynasties in Chinese history and being the starting point of the Silk Road.

As the capital and political and economic centre of ancient China, Xi'an has been named a true museum of history.

Nowadays, Xi'an is one of the most important central cities in north-western China, linking Europe and Asia, and has seen important economic, cultural and commercial developments.

Xi'an has a long history and has left many places of interest for her. These monuments are like treasures, embedded in the city, waiting for people to explore.



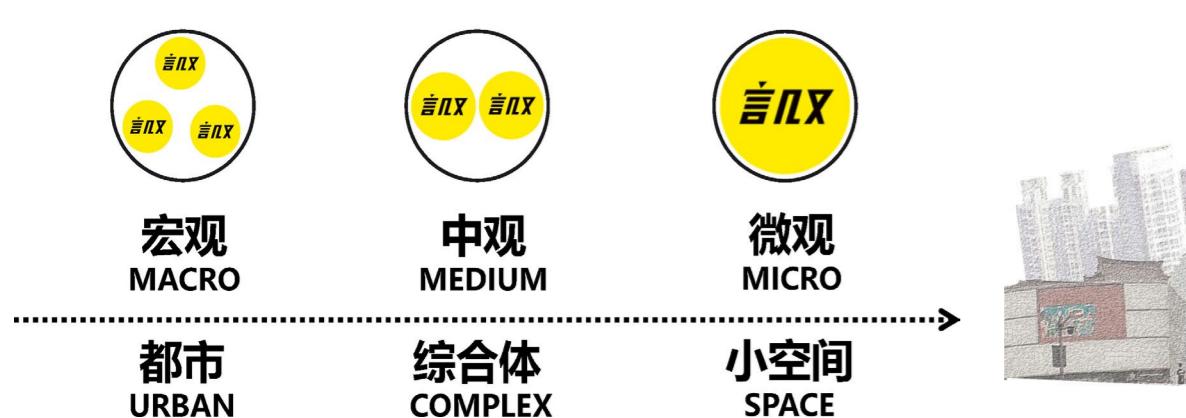
DESIGN STRATEGIES

THREE SCALES

Macro: How do we respond to the context and contribute to urban environment?

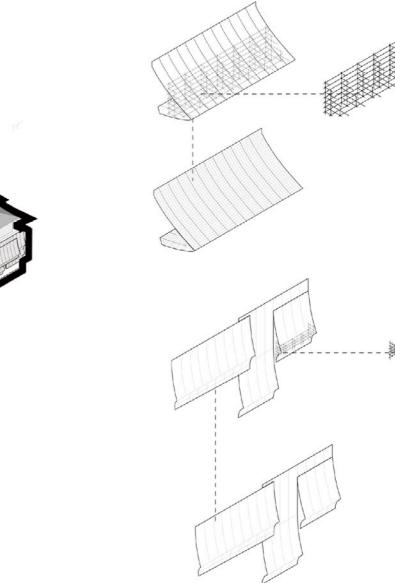
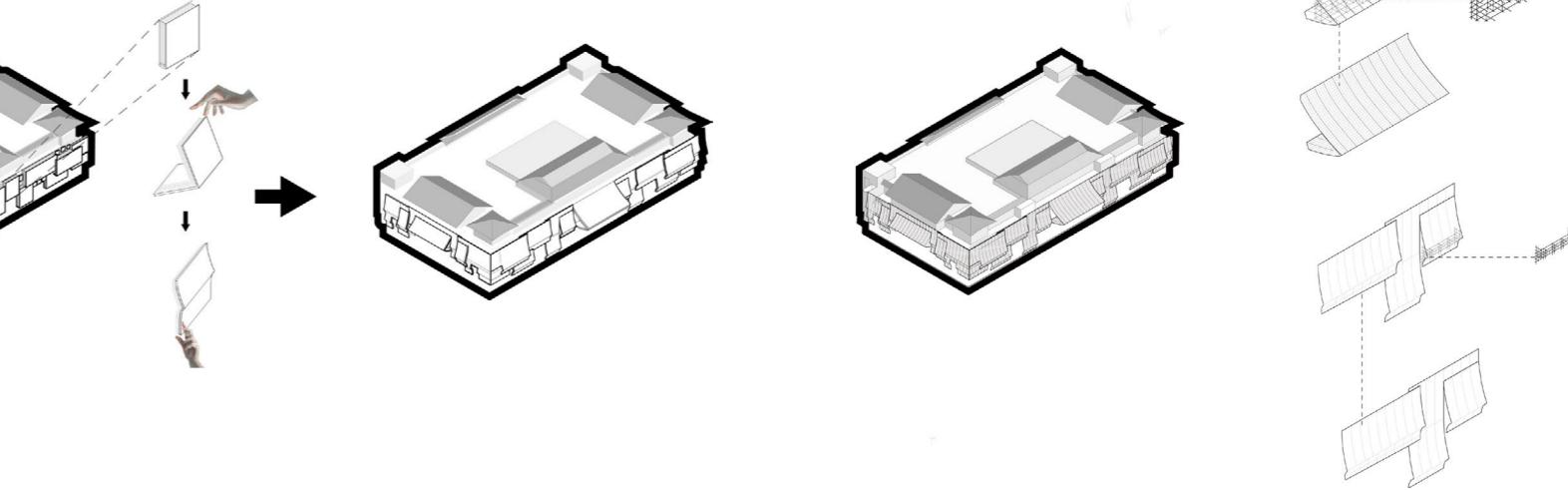
Medium: How to implement Yan Ji You as a cultural brand into a commercial complex?

Micro: How to create a unique bookstore and other spaces continuously as well?

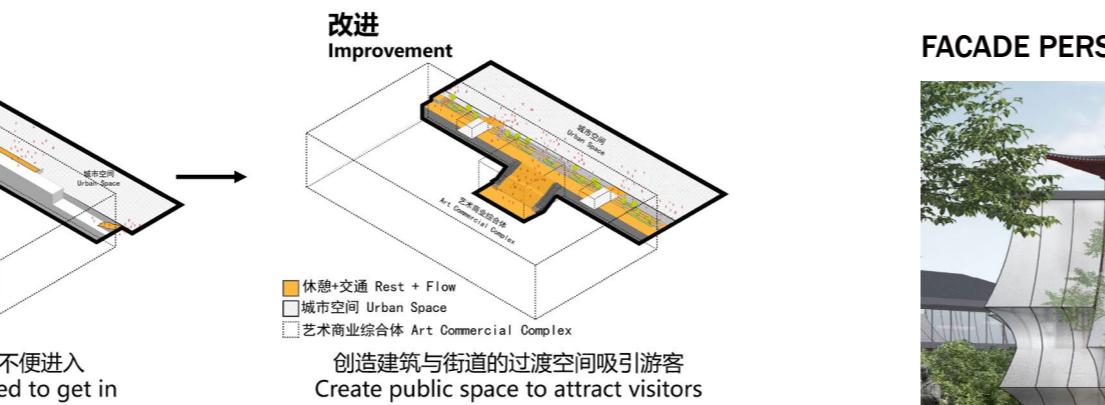
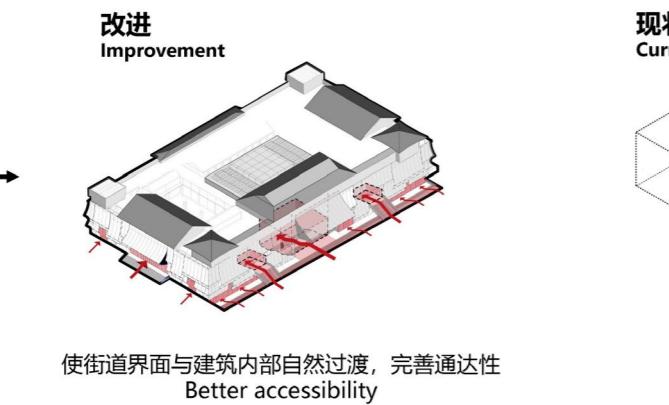
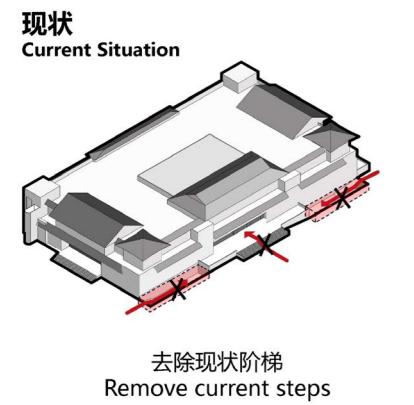


The shape of facade looks like an open book, which is a correspond to the theme of the building.

The shape of facade also looks like the roof of traditional architectures in Tang dynasty, which corresponds context.



STRATEGIES ON URBAN INTERFACE



FACADE PERSPECTIVE

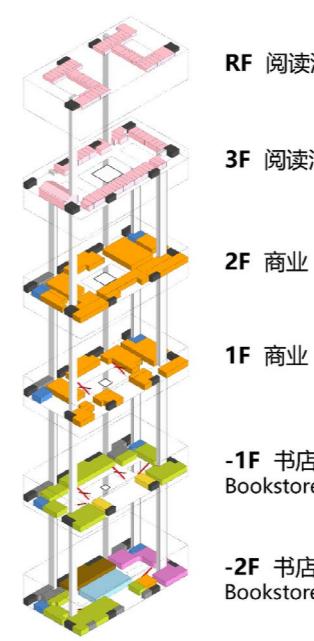


FACADE RENOVATION CONCEPT

PERSPECTIVE SECTION



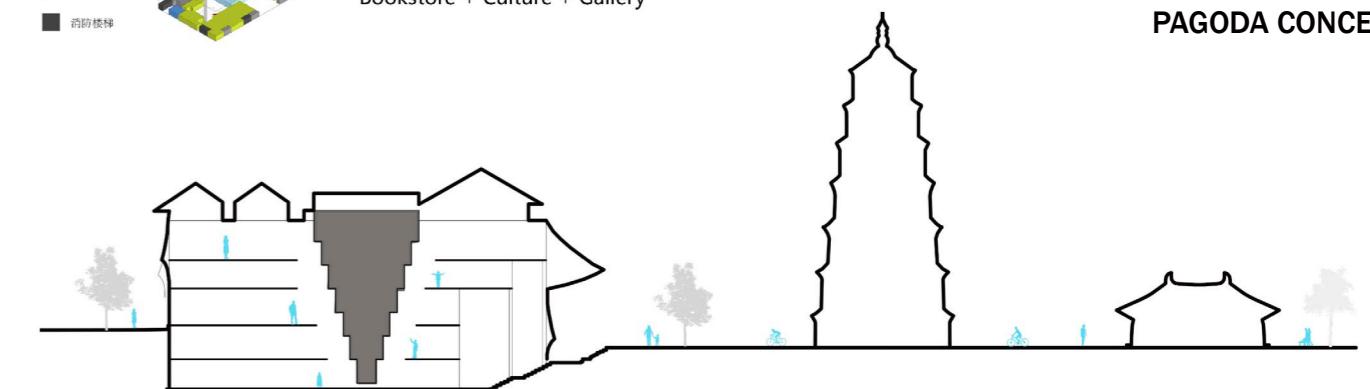
SECTION DESIGN



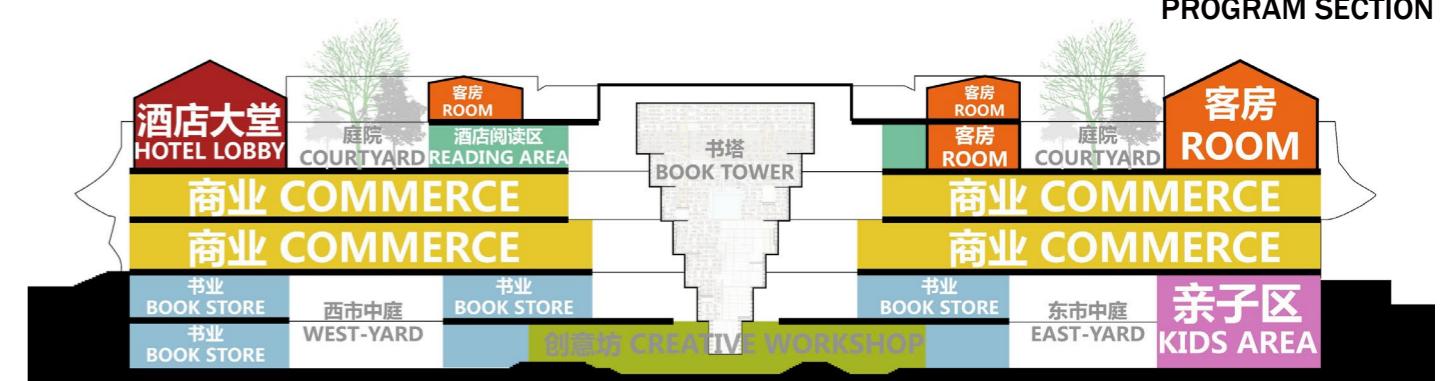
Xi'an is one of the oldest cities in China and the oldest of the four ancient capitals, having held a place in several of the most important dynasties in Chinese history and being the starting point of the Silk Road. As the capital and political and economic centre of ancient China, Xi'an has been named a true museum of history. Nowadays, Xi'an is one of the most important central cities in north-western China, linking Europe and Asia, and has seen important economic, cultural and commercial developments.

Xi'an has a long history and has left many places of interest for her. These monuments are like treasures, embedded in the city, waiting for people to explore.

PAGODA CONCEPT



PROGRAM SECTION

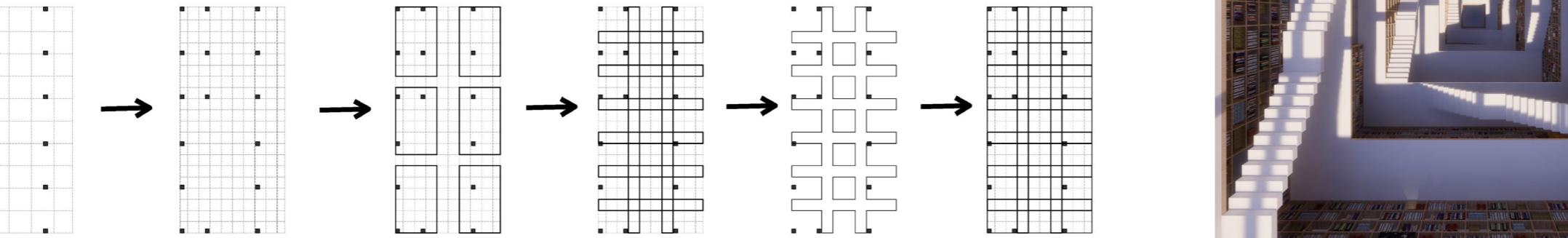


COMMERCIAL AREA DESIGN

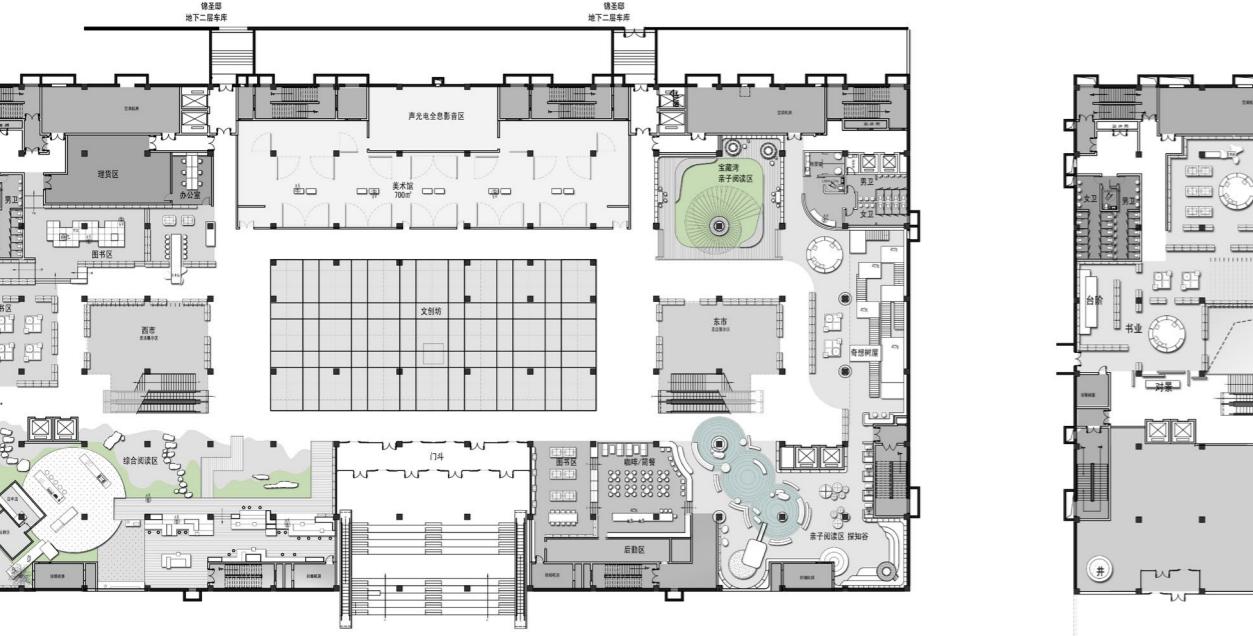


Inspired by the Chang'an neighborhoods of the Tang Dynasty, the space has been disassembled and reorganized to create a commercial area.

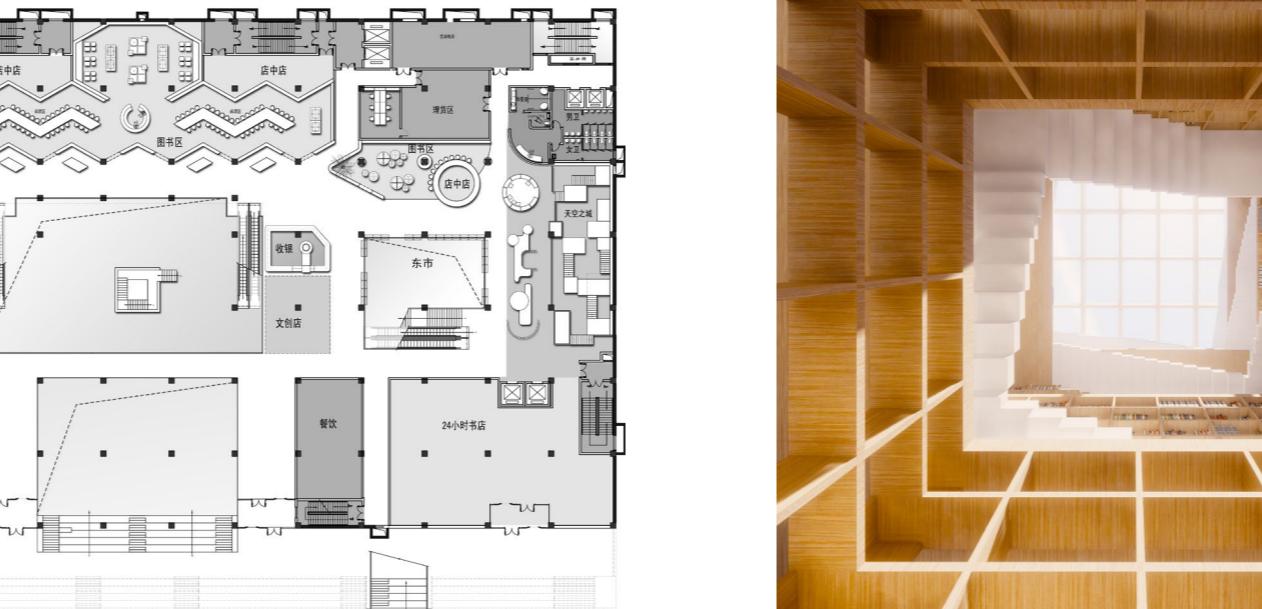
The second basement level is a spatially rich commercial area that has evolved from the Chang'an Place plan, allowing for a total of 24 shops, which are either sunken or raised to create a sense of staggered height and spatial form.



Negative Second Floor Layout Plan



Negative First Floor Layout Plan



BOOK PAGODA PRESENTATION

- Potential Correlation Between the Number of Airbnb Listings and Growth of House Prices in London**

A spatial data analysis and visualisation project
London
01/2022

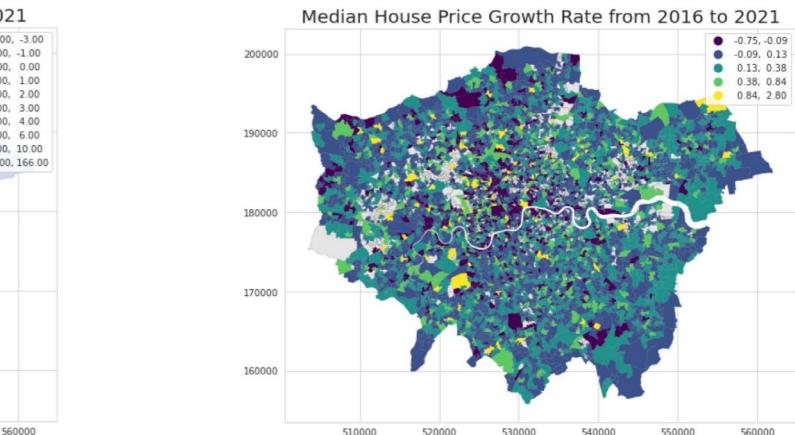
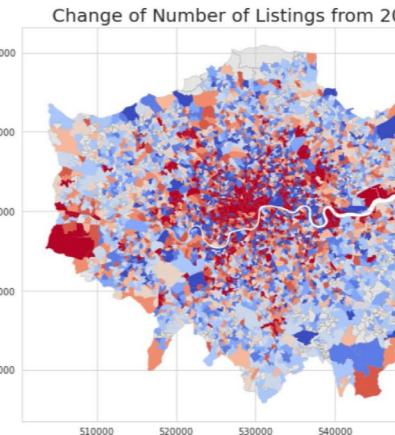
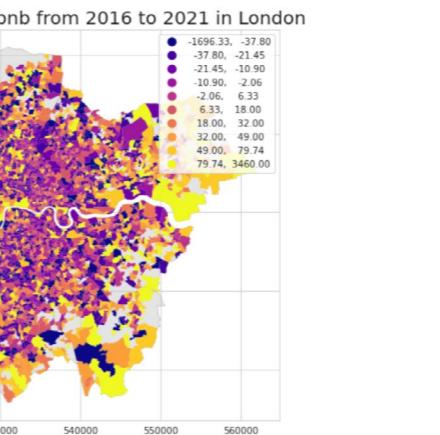
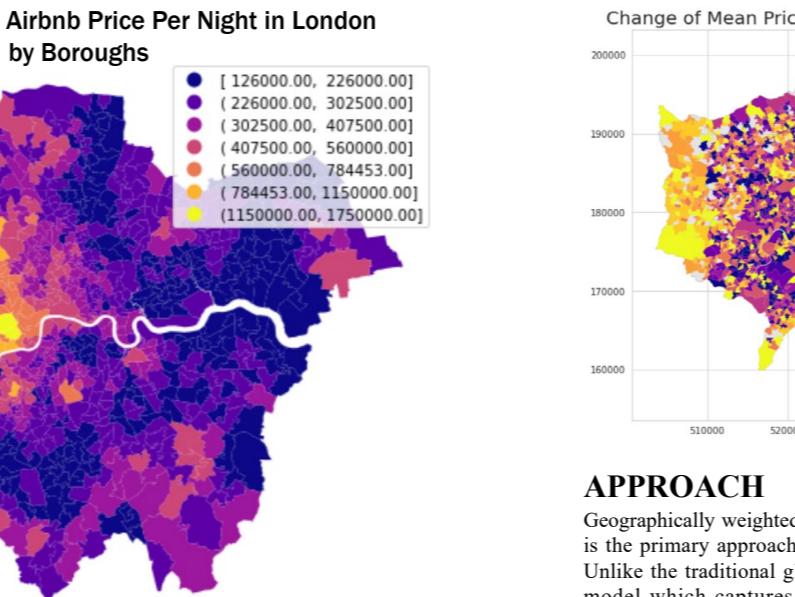
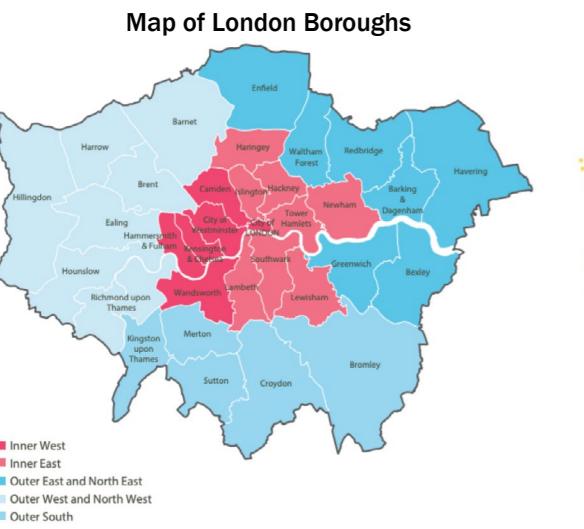
- Lost Children, Stolen Life — Child Trafficking in China**

A spatial data visualisation and interactive webpage project
London
05/2022

DATA ANALYSIS AND VISUALISATION

Potential Correlation Between the Number of Airbnb Listings and Growth of House Prices in London

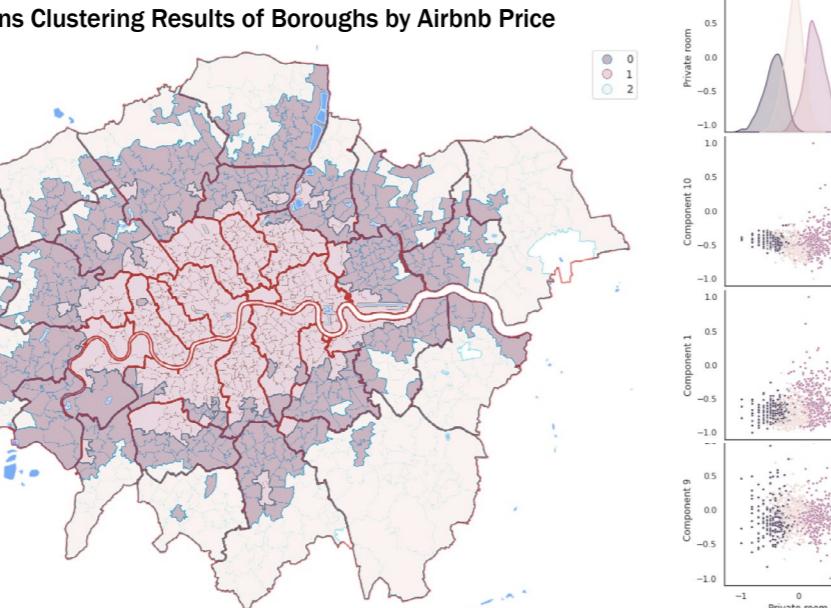
A spatial data analysis and visualisation project, London, 01/2022



BACKGROUND

As the study of Sheppard and Udell (2016) states, in New York, Airbnb listings have a statistically significant correlation with local house price. And as long as Airbnb properties are not the negative source primarily, this correlation would be positive. So, investors are very likely to make speculative purchase of residential properties for potential capital benefits once the expansion of Airbnb has more positive impact on the area where these properties located. And as a kind of speculative purchase, the investors tend to rent properties in short-term(in other words, becoming listings in Airbnb) for higher profits [Ryan and Ma, 2020]. It will further enhance the growth of Airbnb listings in these areas [Todd, James, et al. 2021].

For the purpose of determining which areas in London have a potential correlation between the growth of Airbnb listings and speculative purchases attracted by rising house prices over the same period, the median house price was used as the independent variable and the growth of airbnb listings as the dependent variable for the LSOA resolution in London(LSOA is a suitable geographic level for narrowing the targeted areas in this analysis because it's level is smaller than other resolutions relatively, with sufficient available data, and has generally equal population in one of areas[ocsi, 2019]). Then a local regression analysis was conducted for each study area using the geographically weighted regression(GWR) to finally filter out the areas with the highest correlation between the two variables.



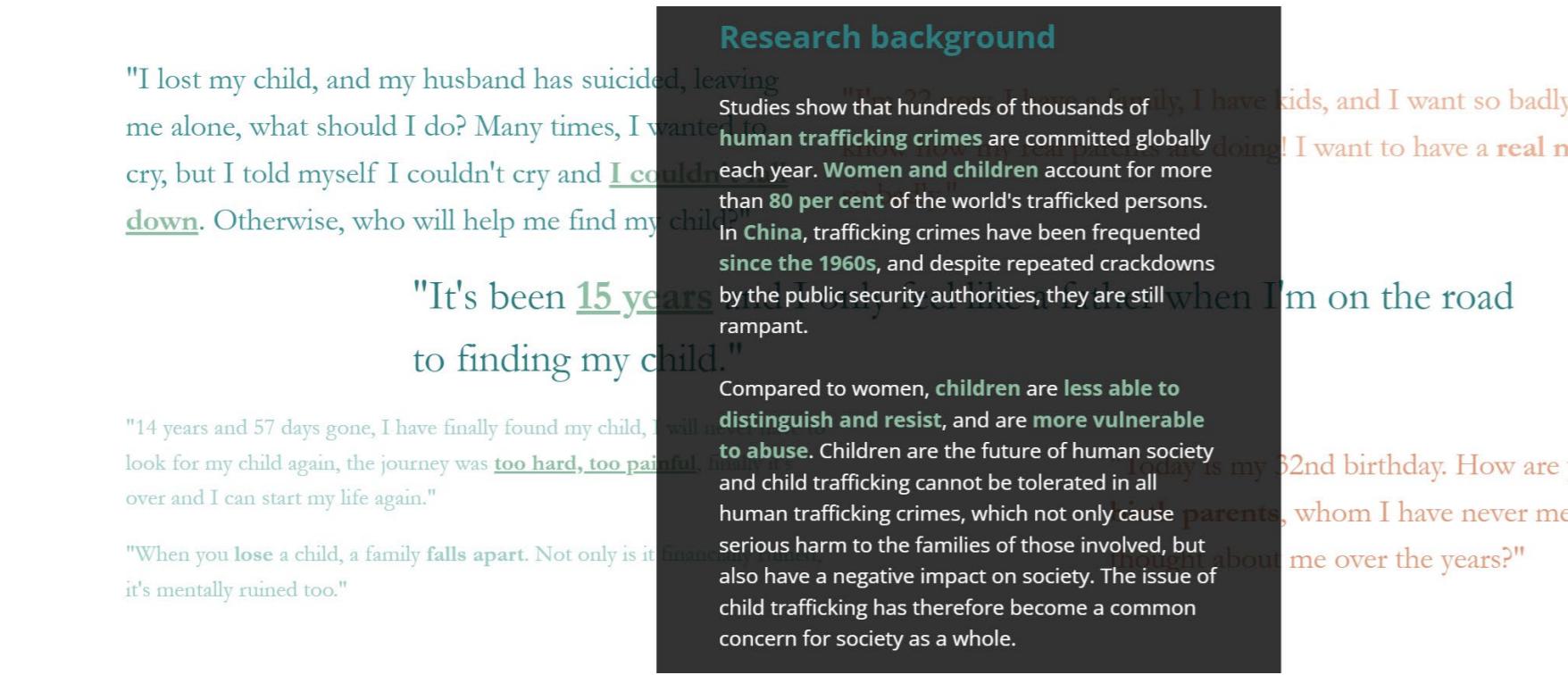
APPROACH

Geographically weighted regression (GWR) as a spatial statistical technique, is the primary approach to study the problem I raised in previous section. Unlike the traditional global regression model, GWR is a local regression model which captures process's spatial heterogeneity [Fotheringham, Brunsdon and Charlton, 2002], and considers that the data which close to the research targets (in this analysis, the targets are the centre of gravity in each LSOA area) have heavier weight in the model than data further away [Fotheringham, Brunsdon and Charlton, 2002]. In each targeted area, GWR would create a dataset by using nearby data then run a regression model on that area. By calculating or specifying the parameter that controls locality (called bandwidth), it is determined how close to the target area the observations are to be considered relevant [SAGE, 2018].

Lost Children, Stolen Life – Child Trafficking in China

A spatial data visualisation and interactive webpage project, London, 05/2022

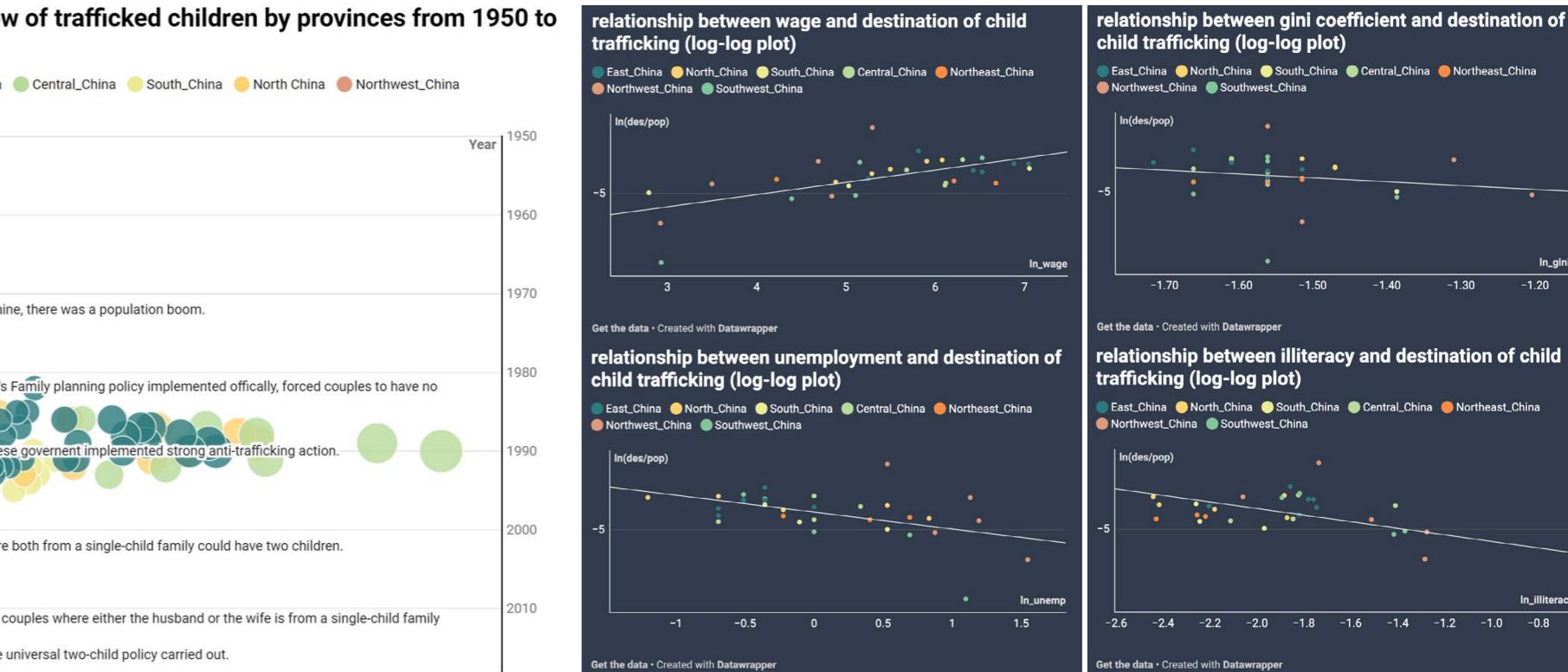
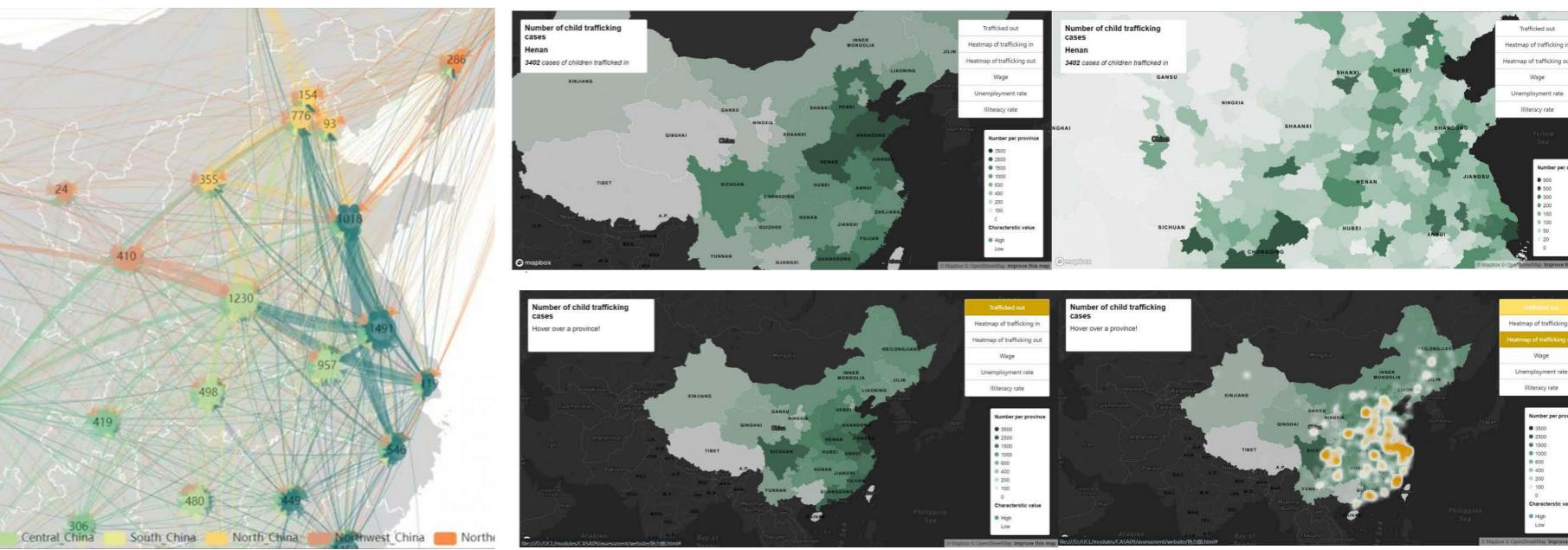
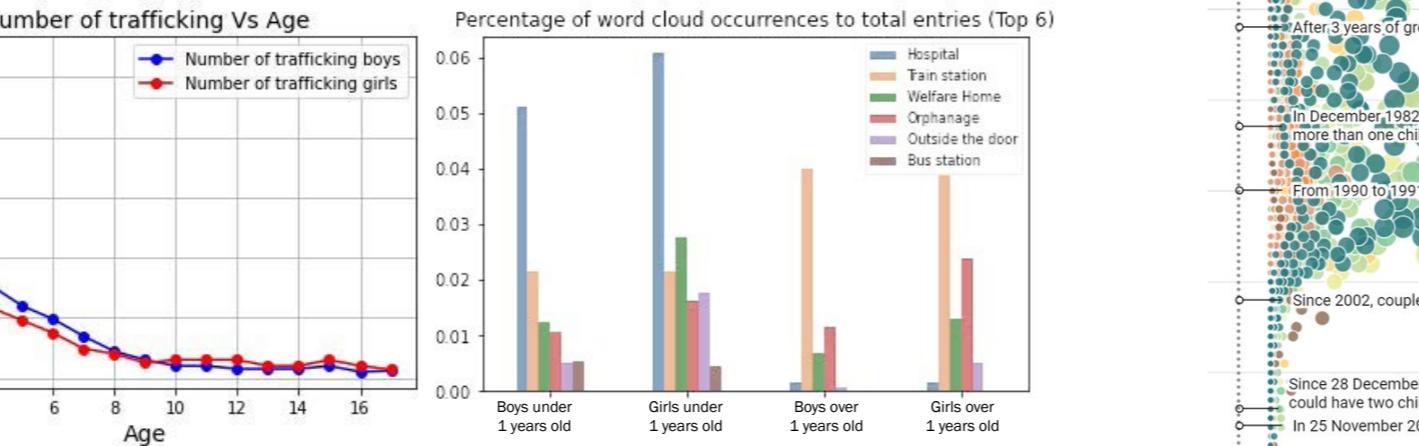
View the webpage in here: <https://rollingcasaer.github.io>



INTRODUCTION

Children trafficking is considered one of the most serious crimes of the 20th century (Wang, 2015). Looking back at the trend of child trafficking around the world, most countries link the purpose of child trafficking with sexual slavery and labour exploitation (Martinho, Gonçalves and Matos, 2020), but considering the differences in time, space and culture, the main purpose of child trafficking does not seem to be the same in China. The phenomenon of child trafficking in China has a long history and has for a long time been a neglected crime, even considered a 'tradition' (Tan, 2018). Child abduction and trafficking is a serious and irreversible danger to the abducted child, the family of origin, the family that bought the child, and society at large (Wu, Liu and Duan, 2017). Of particular note is that, China experienced a large number of child trafficking incidents from the 1980s to the early 2000s, where the ultimate purpose of these cases is more linked to family inheritance and getting rid of the moral humiliation of being childless (Liu, 2018), so the perpetrator is both a participant in trafficking and possibly an illegal "guardian" who protects the child's growth (Ren, 2004). This makes child trafficking in China complex with specific characteristics and factors.

The purpose of this article is to analyse the characteristics of child trafficking in China through a visual and interactive approach. In section two, we introduce the background information and conduct literature review. Then we describe the data processing in section three. Detailed data analysis, visualisation methods and interactive integration are explained in sections four, five and six respectively, based on which we form our conclusions in section seven.



RENDERINGS, DIAGRAMS AND DIGITAL ARTS

