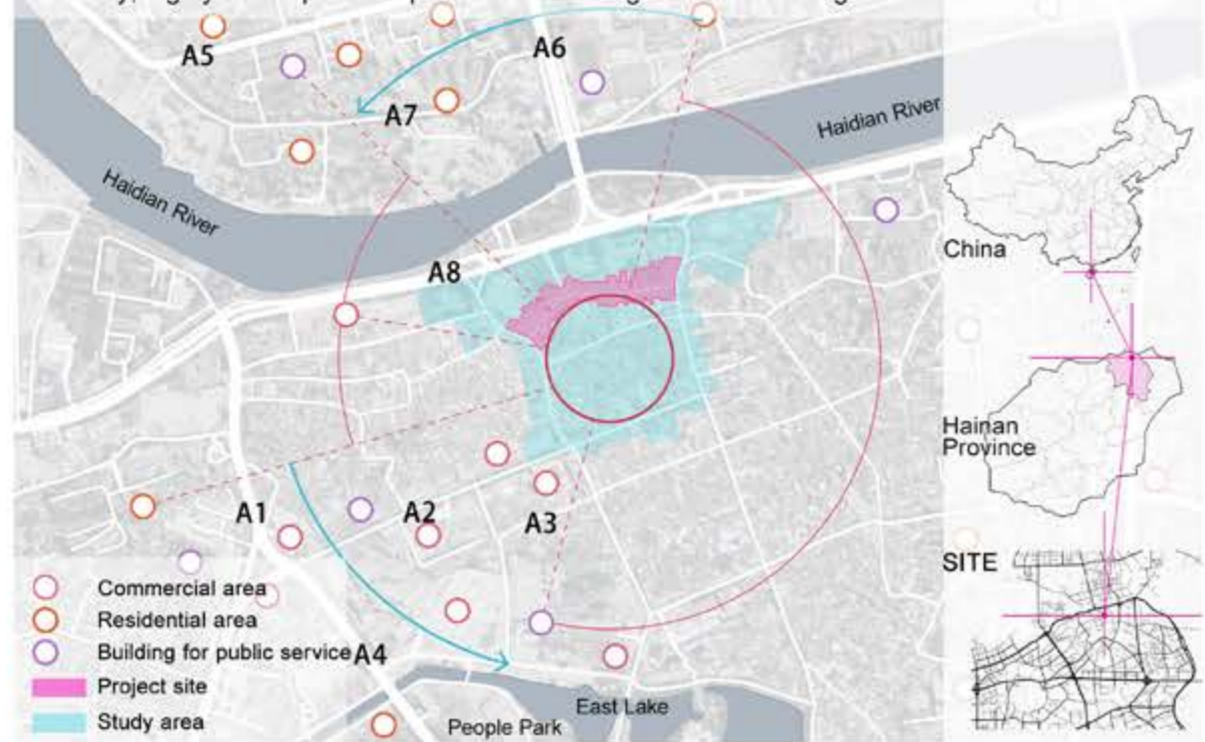


Location

The research scope is the old arcade block in north Haikou, Hainan province, China. It is made up of five streets. The design scope is one of them called "Zhongshan Rd." It is located in the old town of the city, highly developed with perfect surrounding facilities and large footfalls and traffic flow.



Space Syntax

Analyze and explore the spatial form and connection of blocks through analysis on the integration and control level and depth value of blocks, so as to know, understand and transform historical blocks more effectively and harmonize the relationship between space and the society.

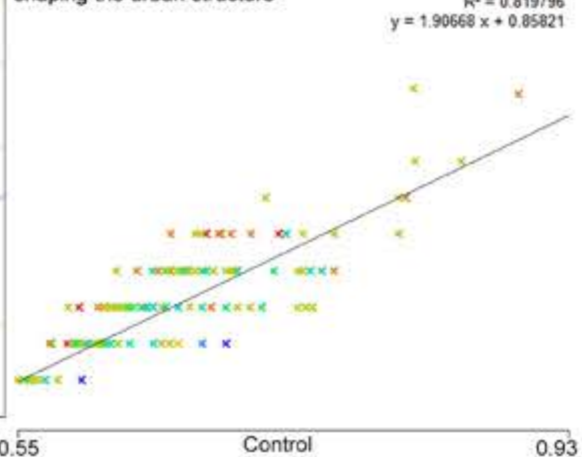
Integration analysis

A high level of integration shows that the space is highly concentrated, which means it is easier for people to reach the area



Connection-control association

The control level is highly correlated to the connection level, showing that the arcade area plays an important role in shaping the urban structure



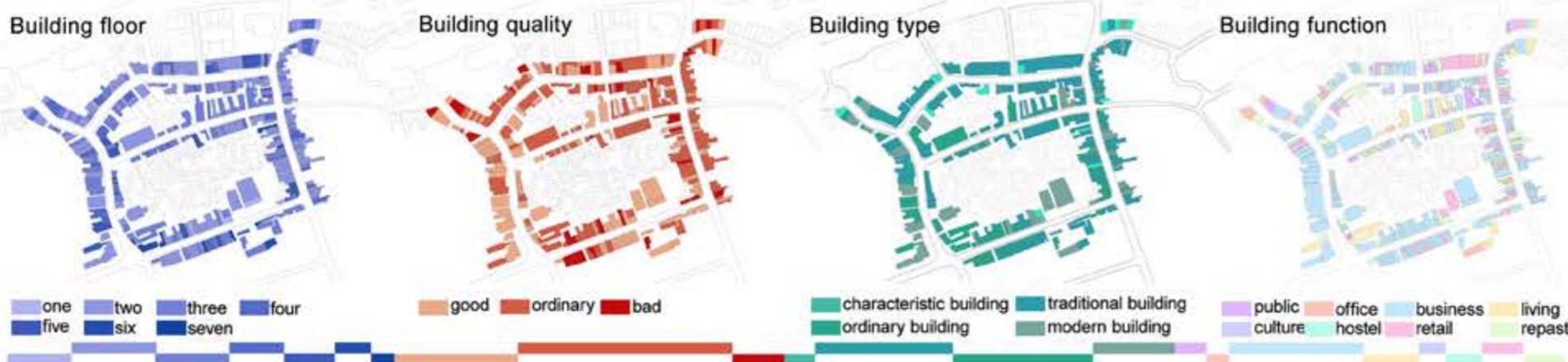
Depth value

It can be concluded according to the analysis on the depth value from the eight surrounding key blocks to the site of the project that it is comparatively easy for crowds in the surrounding block to reach the base that is located at the central position of urban residents' life. We shall make use of the arcade space intensively, which bears important value to the maintenance of the spatial harmony of cities.



Function Analysis

The buildings inside the base are of high quality. They are low-rise buildings. The business format and appearance of the arcades are complex and well-protected on the whole; there is great traffic pressure and the roads are used with great intensity. The overall traffic condition is complicated.



Flow date collection



Road classification



Open space



Street carrying



Comprehensive Situation

The space of Zhongshan Rd. in the old arcade block is single, lacking feelings of experience and communication for people. Now I'll shape the space of Zhongshan Rd. pertinently through constructing spatial models, so as to improve the connection between human beings and space.

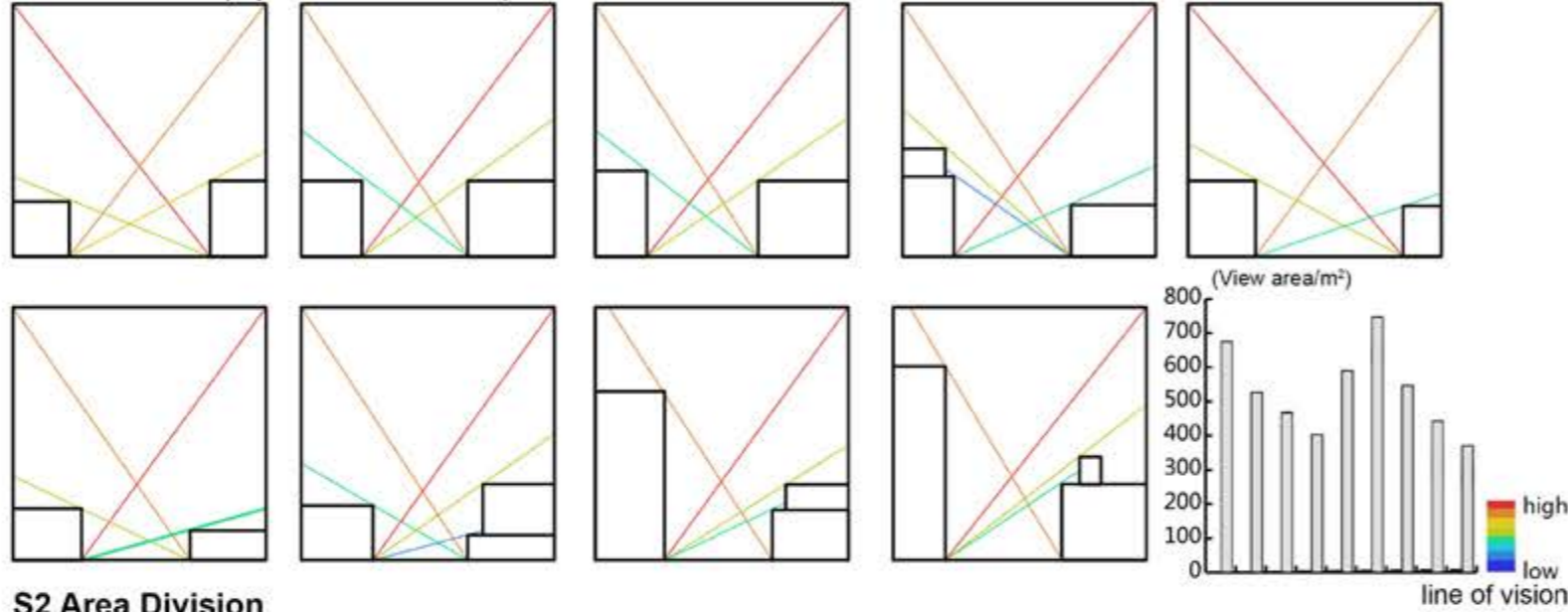


Space Value Analysis Process

Build a data model, transform the external spatial value of buildings into data, so as to guide the exterior design of all parts of buildings sustainably, achieve overall spatial harmony of the block and strengthen the emotional communication with human beings

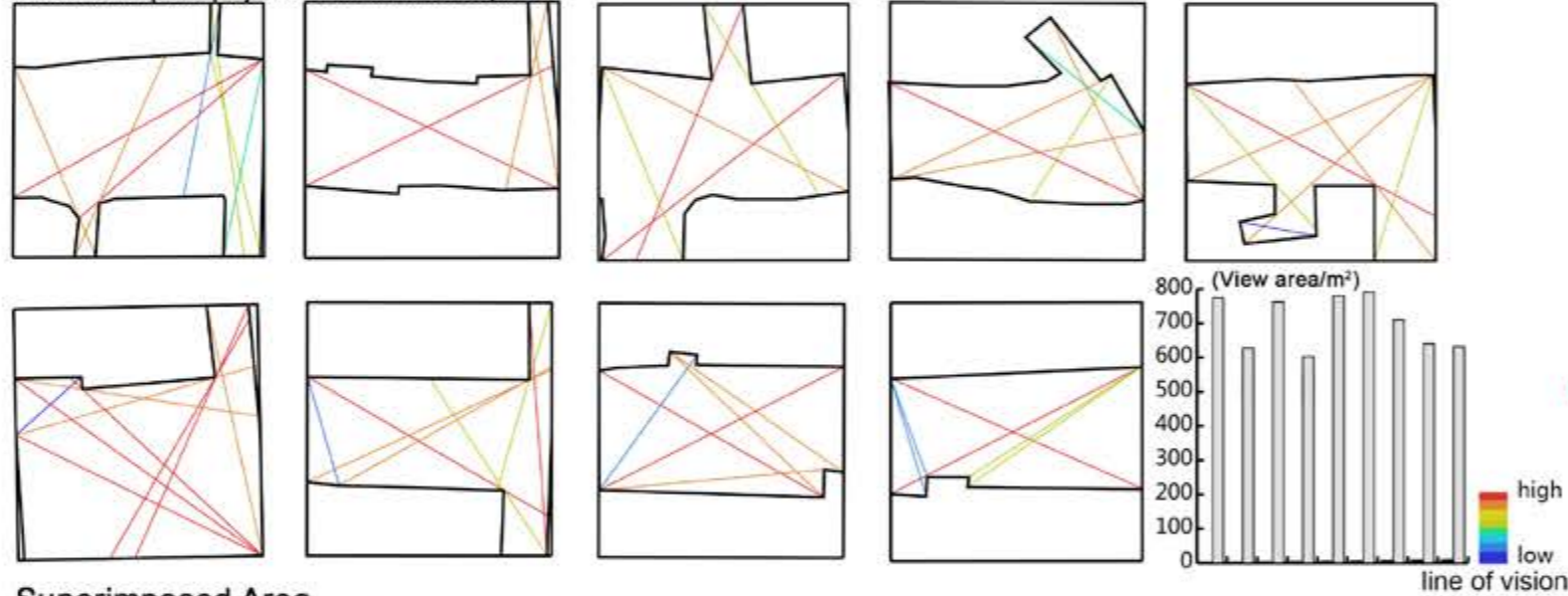
S1 Area Division

Calculate the facade projection area of nine 3D spaces

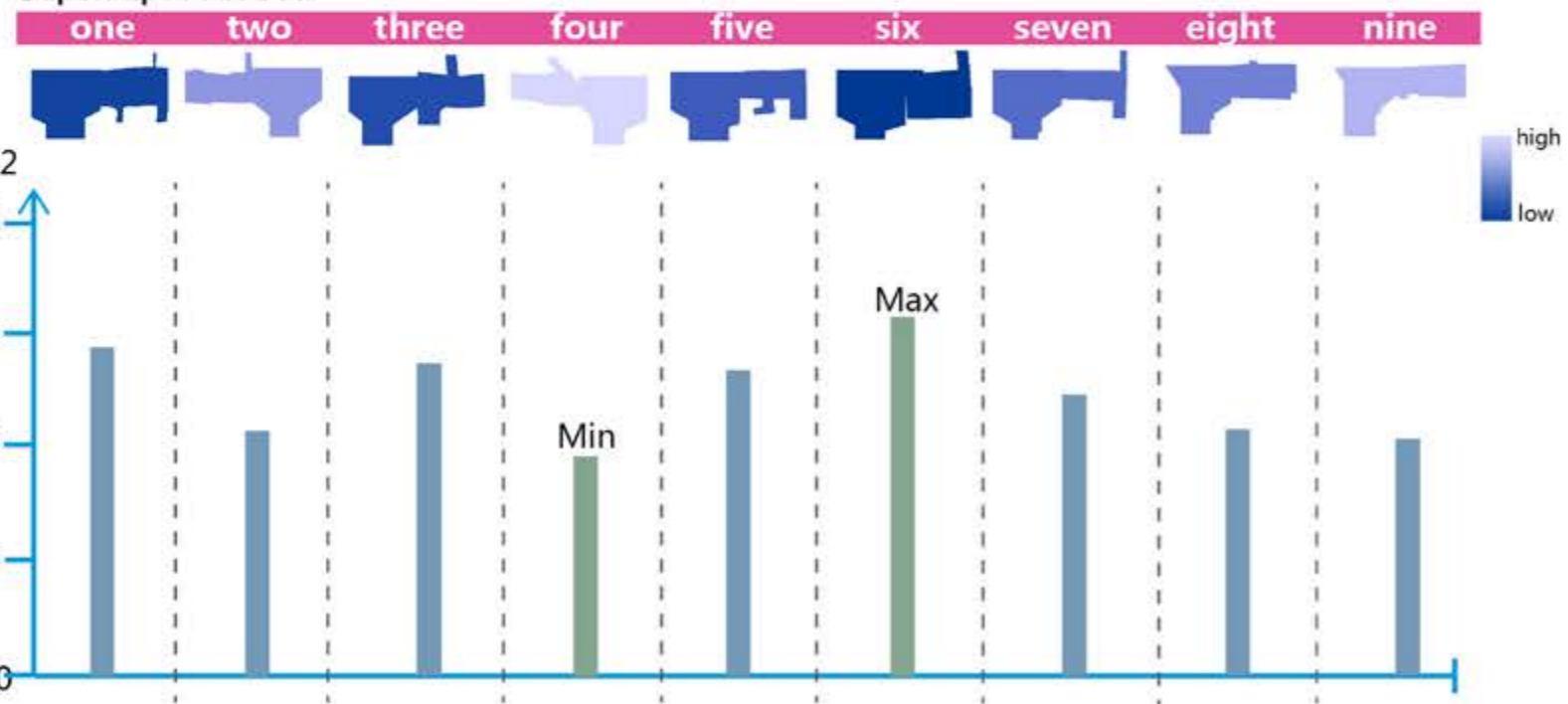


S2 Area Division

Calculate the plane projection area of nine 3D spaces

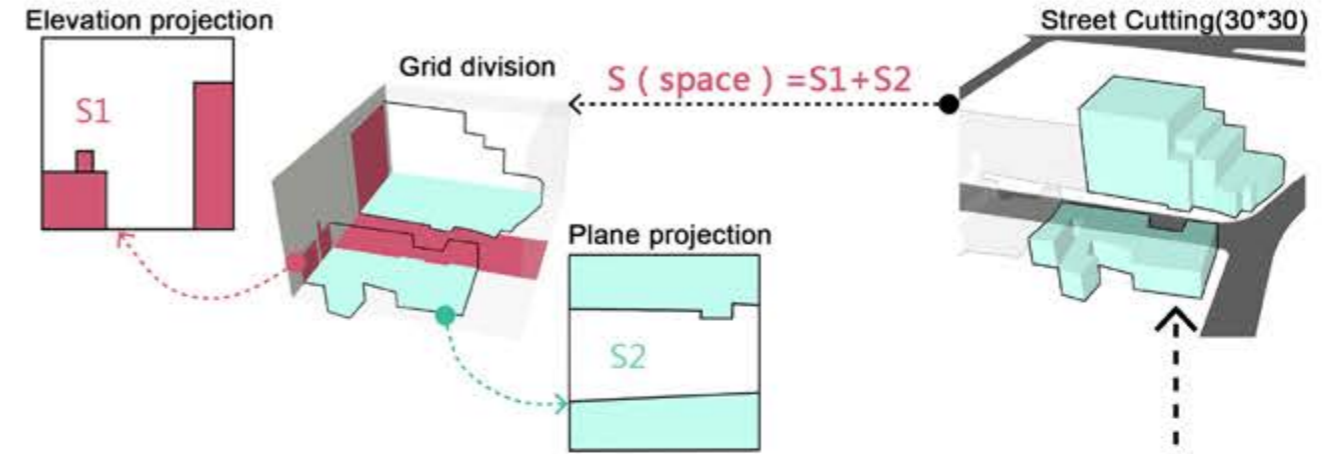


Superimposed Area



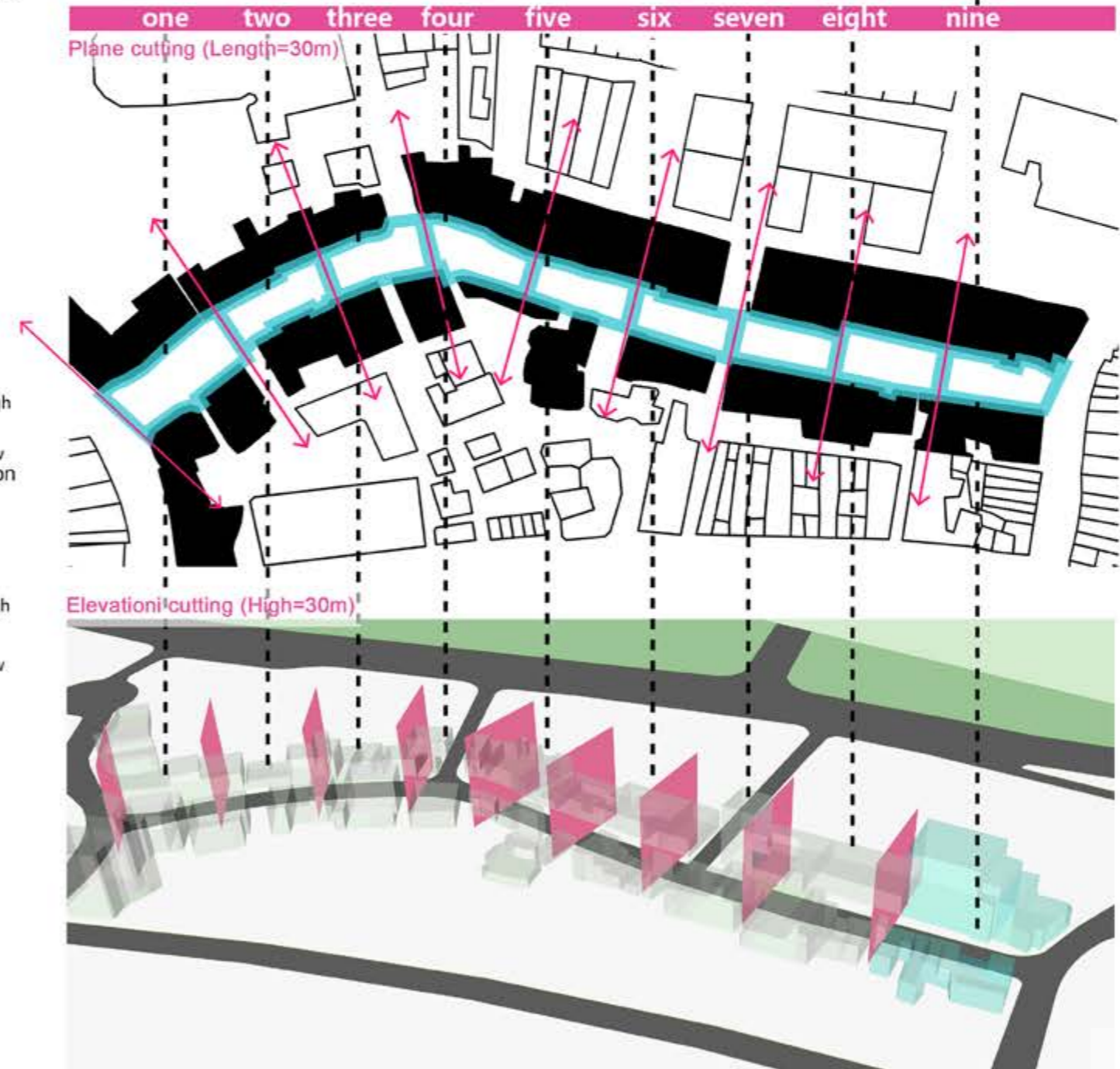
Division Diagram

The value of space openness is equal to the elevation projection area (S1) plus the plane projected area (S2) of each street cutting space



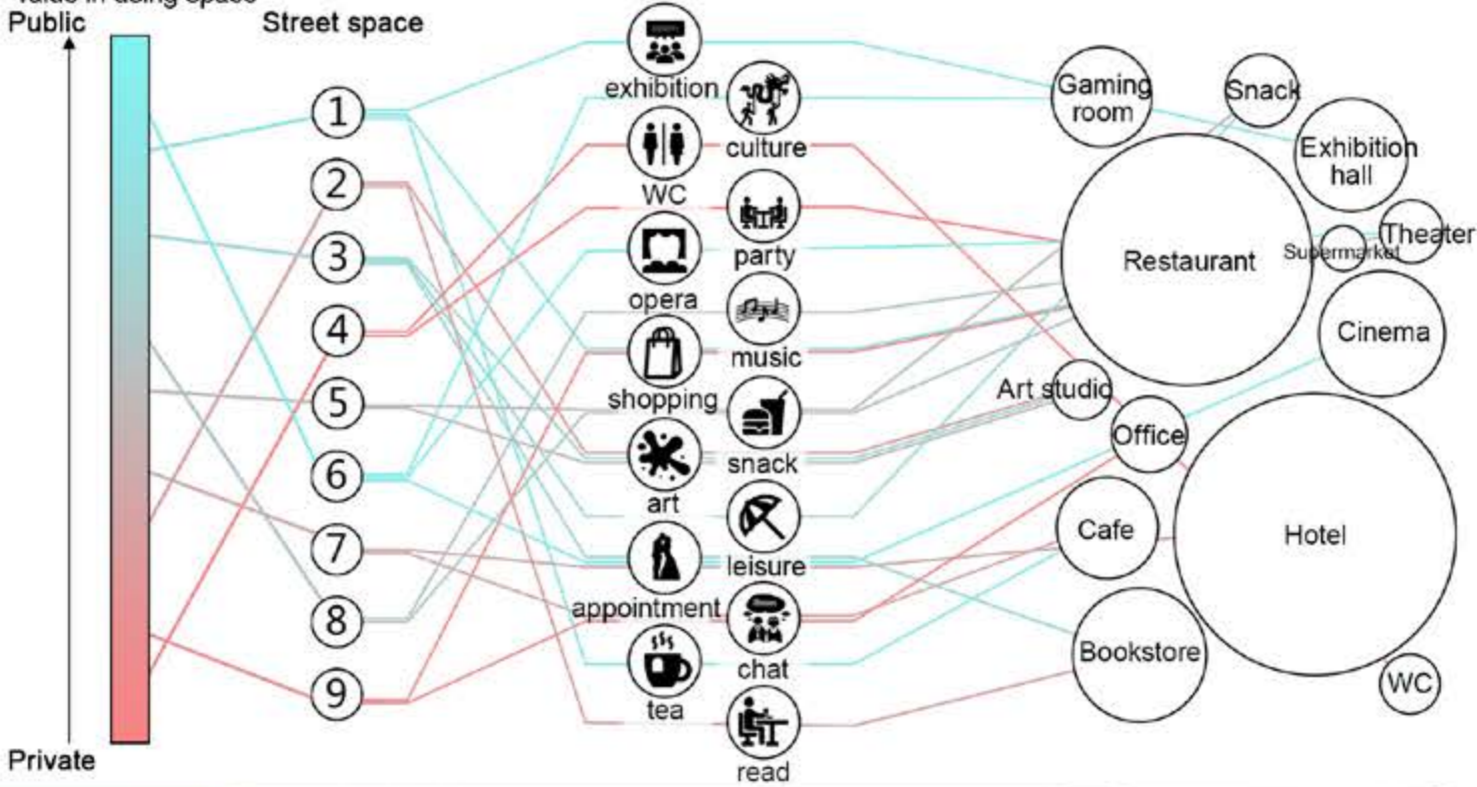
Space Division Method

Designed area—Zhongshan Rd., a 270-meter-long pedestrian street. I divide each 30m*30m into a 3D space. All in all, there are 9 such spaces. Calculate the plane and facade projection area of each space to yield the area of the exterior field of vision of buildings. The greater area of the field of vision, the better the publicity is. The smaller the area, the better the privacy is.



Functional Arrangement

Redeploy the function of each space pertinently according to the evaluation results of the data model, start from personal emotions, different attributes of space correspond to different functions, so as to realize spatial harmony and improve the value in using space



Spatial Structure

Reshape the spatial structure of streets by combining the attributes and functional deployment of space; In addition, set four open nodes to meet people's need of rest and entertainment, activating and personalizing the streets; the pavement and open space along the streets complement each other, forming boundary effect with a sense of security



Aerial View

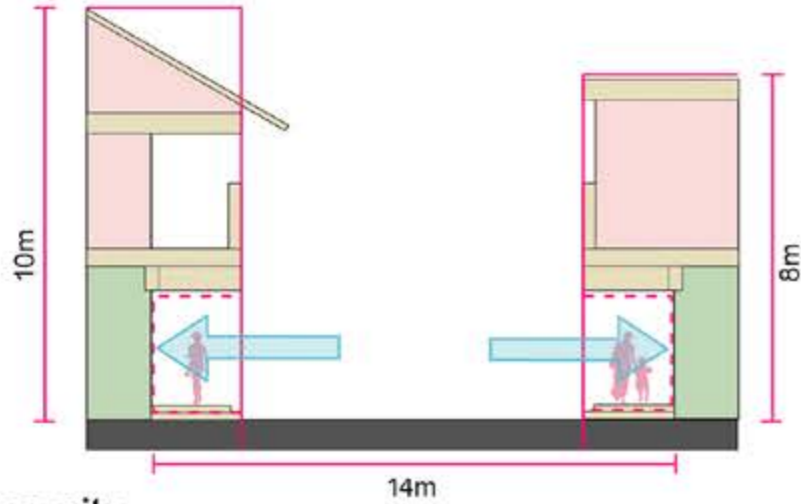


Exterior Space Design

To maximize the utilization of the space on the historical block, the evaluation results of spatial data models are combined for the in-depth exterior design of buildings from four aspects. This can make it more comfortable, happier, safer and improve the experience of people in the historical block area.

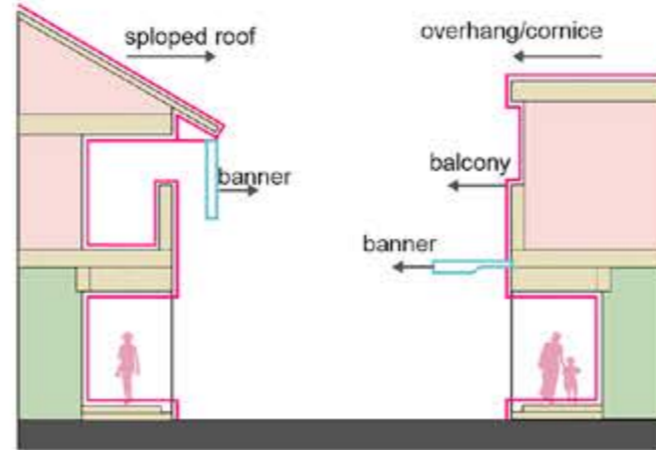
Comfortability

Widen the streets, adjust the ratio between the length and width of streets and make it more comfortable for shopping



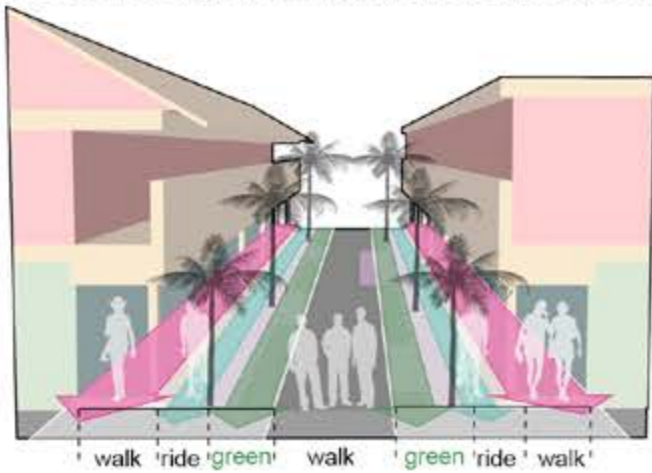
Pleasure

Design the profile of the facade of buildings, enrich the layers of streets and make people happier



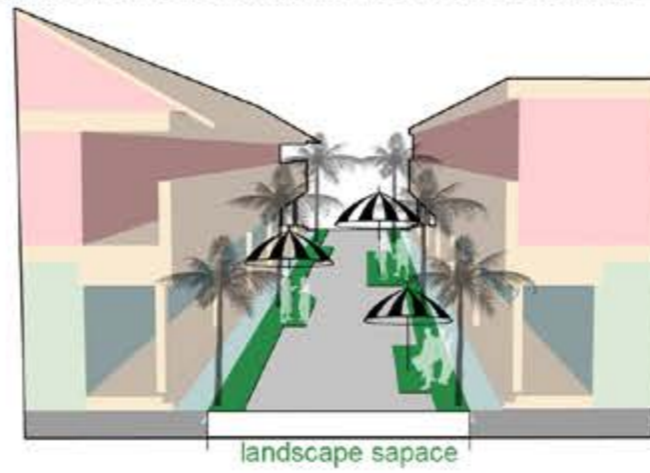
Security

The linear design of the street forms four kinds of border effects to make the street more orderly and improve people's sense of security



Experience

Design landscape nodes, arrange landscape sketches, enrich street elements, and improve people's experience

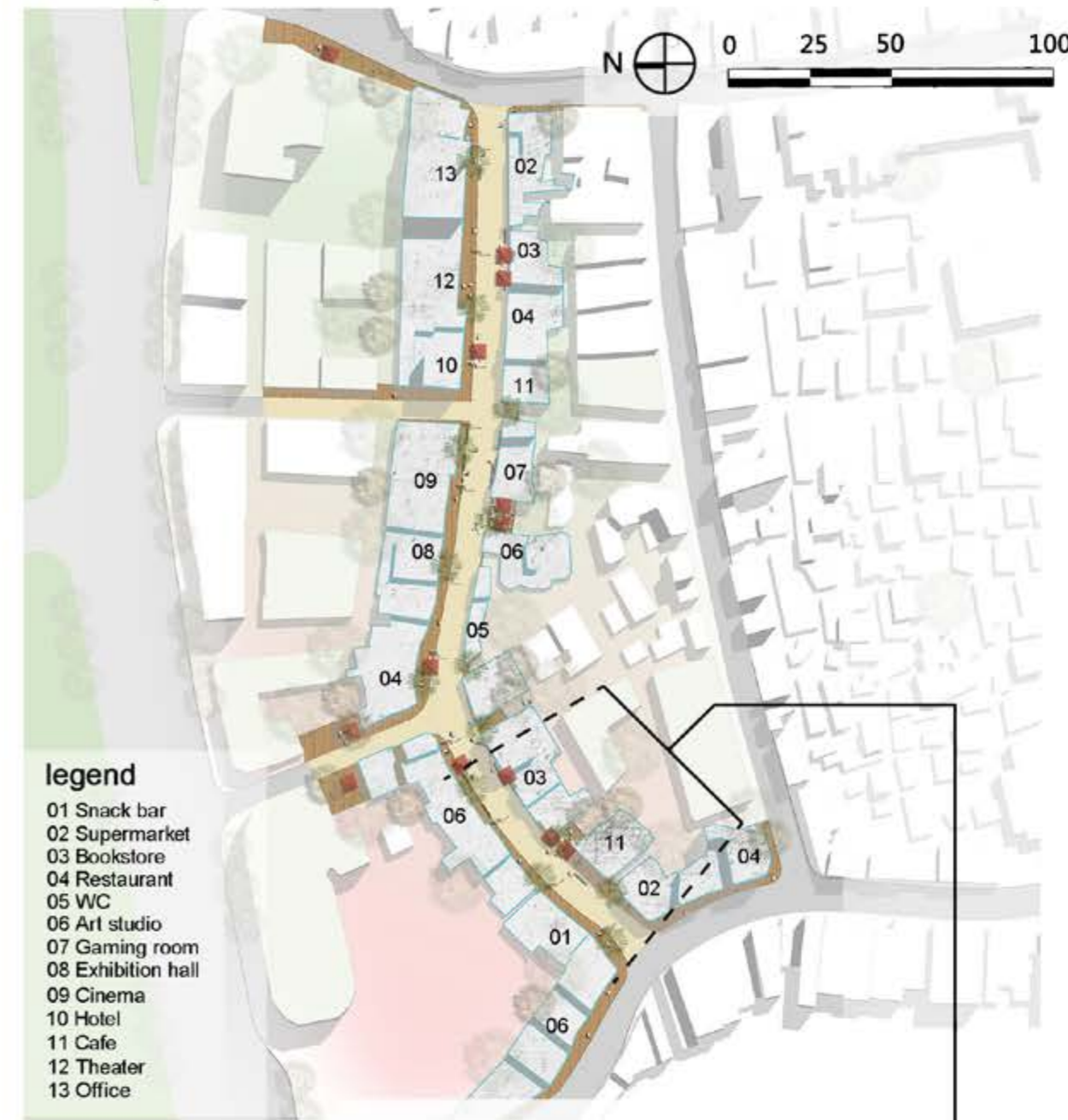


Graphic Design of Streets

The design integrates buildings and the environment, and forms strips of tiles, buffer, landscape and floor through extending and cutting streets and buildings, combine linear space and curved lines flexibly, optimize space design, highlight the features of the streets, and make the connection between space and human beings richer and more harmonious



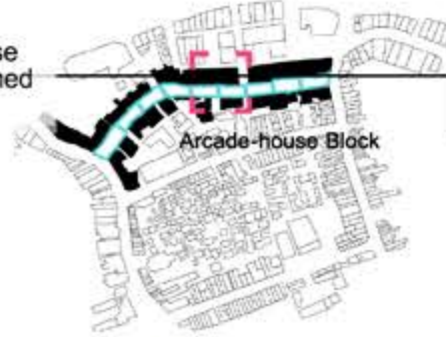
Masterplan



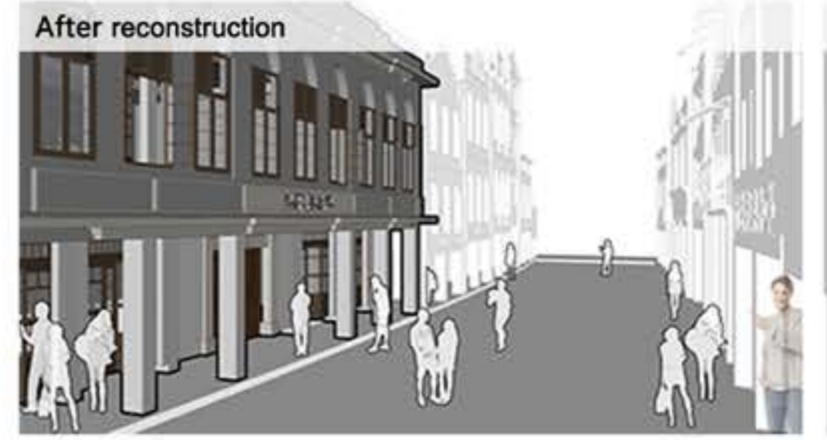
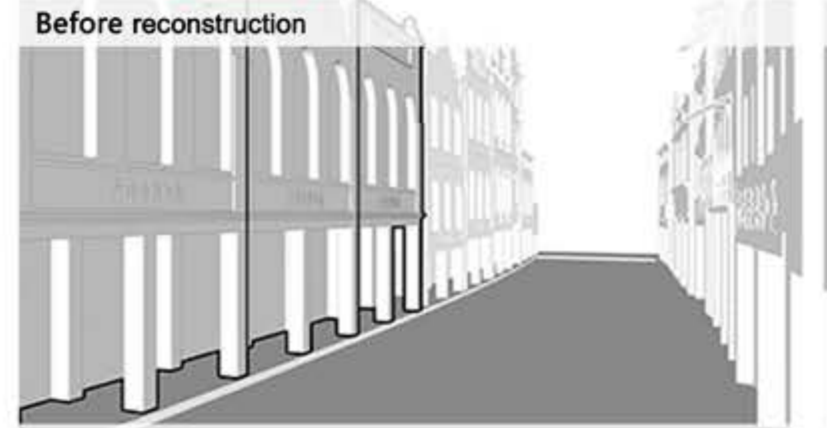
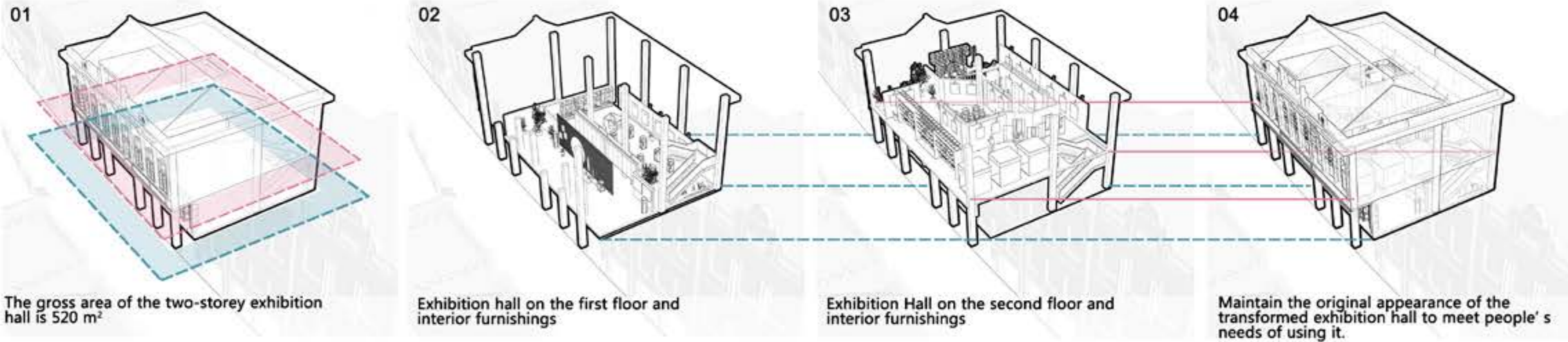
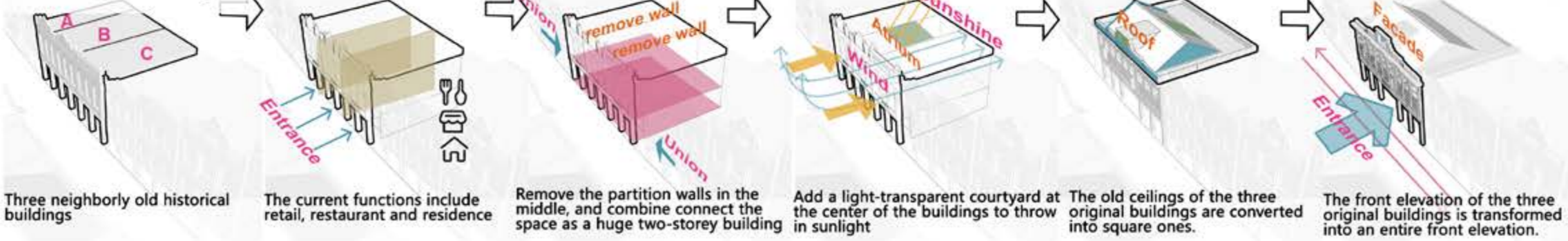
Exhibition centre Design

Transformation and re-use of the historical building arcade-house

This building is located on Middle Zhongshan Rd. in Arcade-house Block. It is a historical townhouse with three buildings. According to space evaluation, it has great publicity. Now it has been transformed into a public and open exhibition hall for the tourists to visit.



Pushover Analysis



Aerial View

The historical arcade buildings are shaped like long stripes. The width of their broad side is small, and the depth is great. In order to meet the needs of exhibition, the townhouse is transformed into an individual building covering 520m² through connection and combination. In order to improve lighting, a light-transparent courtyard is added and a gate on the first-floor entrance is widened.

