

Parallel Session 5 – Station Design 2

# Station and city: Development and Innovation of China's Railway Stations



**UIC nextstation**  
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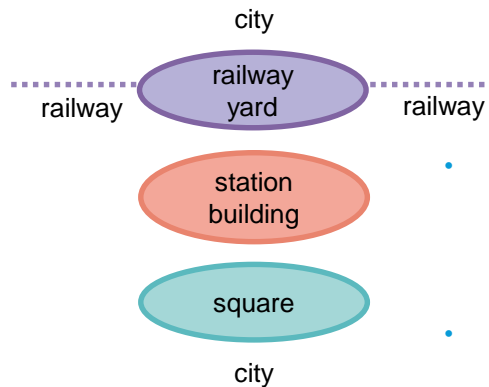


# 1

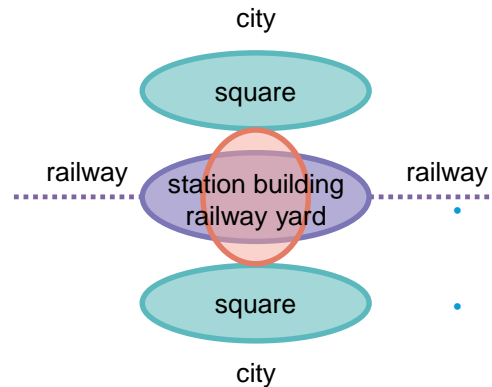
## PART 01

### Evolution of the relationship between China's railway stations and cities

# ● First and second generation



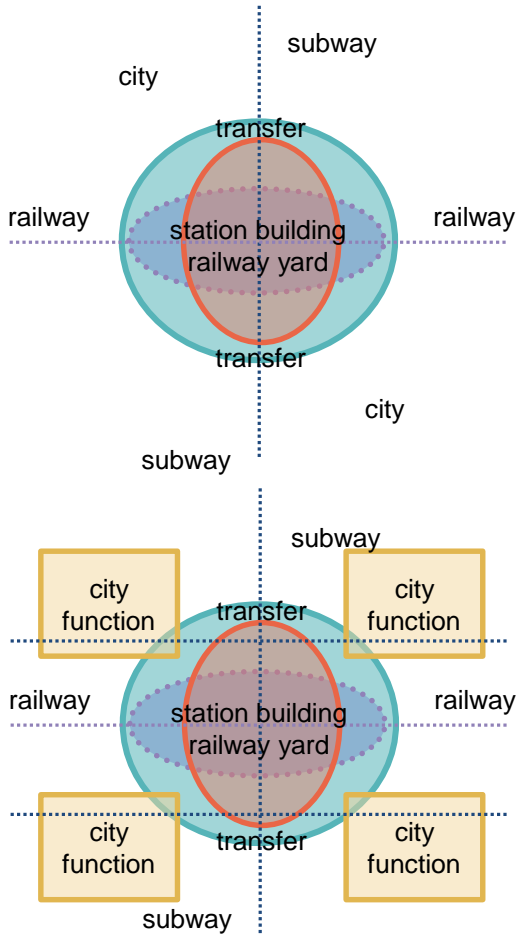
- the early railway station was the connection point linking the inside and outside of the city, known as the **City Gate**
- the station was an independent figure without considering the city's problems



- the station was an independent external **transportation hub**
- the appearance of station building complex was an early attempt to introduce urban functions



# ● Third generation

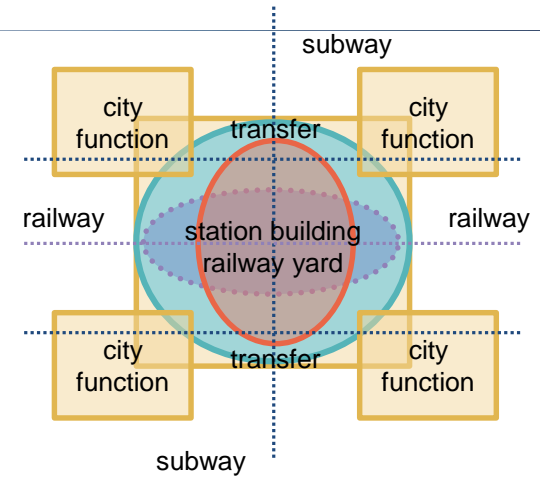


- large numbers of high-speed railway stations were built at the beginning of the new century
- a comprehensive transportation hub
- "station" and "city" have achieved the initial integration in terms of transportation

- the railway department realized the importance of functional composite and integrated development
- the actual operation was mostly limited to adjacent development or reserved development



## ● Fourth generation - station-city integration



- **station-city integration:** There is no clear boundary between the city and the station, let alone the obstacles of separation. The functions of the city are introduced to the station to form a transport centered urban complex. With the concept of TOD, the station and the surrounding urban areas in a certain range are developed and integrated, so as to obtain the maximum economic, social and environmental benefits to guide the urban renewal.



# 2

PART 02

Recent design practices, exploration and innovation of  
China Railway SIYUAN Survey and Design Group

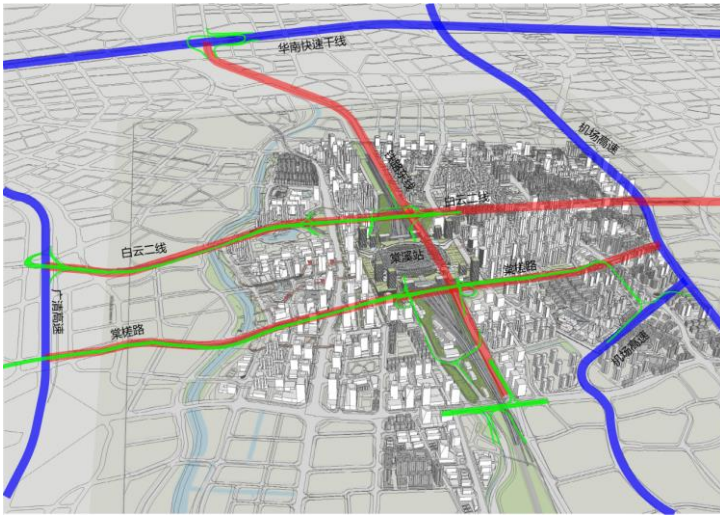
## ● Smooth transport integration



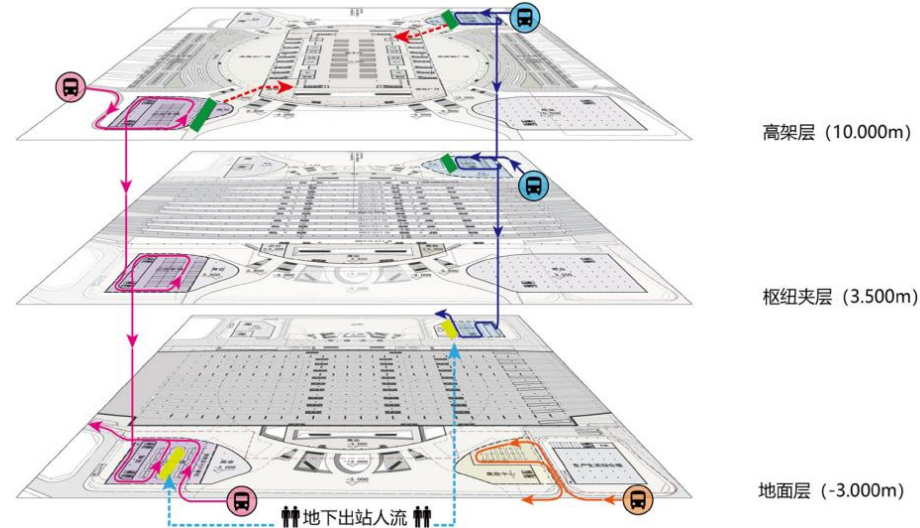
Guangzhou Baiyun railway station is an integrated design of railway passenger station, urban transportation facilities, subway, urban road and comprehensive development above the railway. The total construction area of the hub is about 720000m<sup>2</sup>.



## In and out traffics are arranged in corresponding layers respectively



- 落客区
- 🚗 高架长途车进站
- 🚌 高架公交车进站
  
- 落客区
- 🚗 夹层长途车进站
  
- 上客区
- 🚌 地面大巴车进站
- 🚌 地面公交车进站



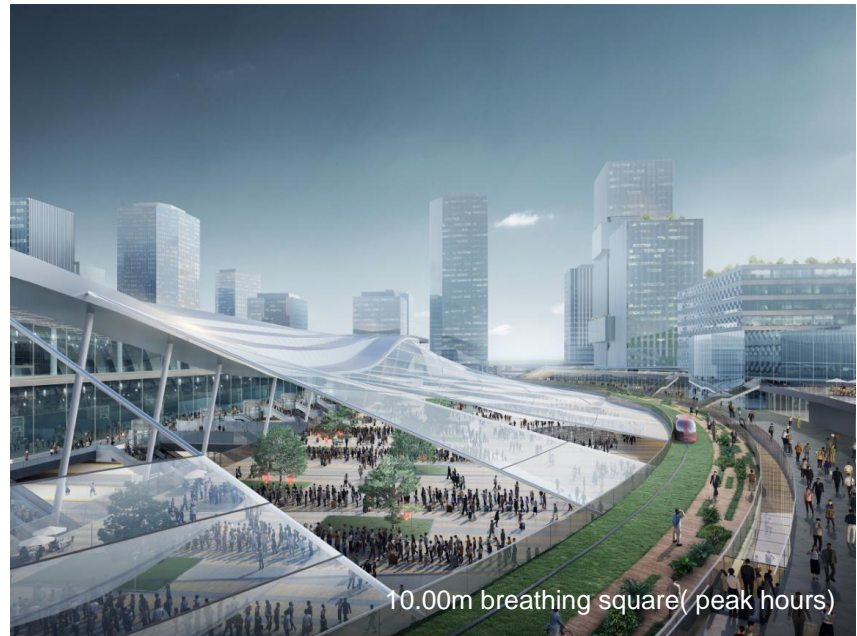
- "North in, North out, South in and South out"
- A three-dimensional ramp system is built to connect the surrounding high-speed roads

- Set up multi-layer transportation facility buildings in the four corners of the station innovatively
- Coaches and buses would go up to the elevated layer to drop, and go down to the ground to pick up passengers

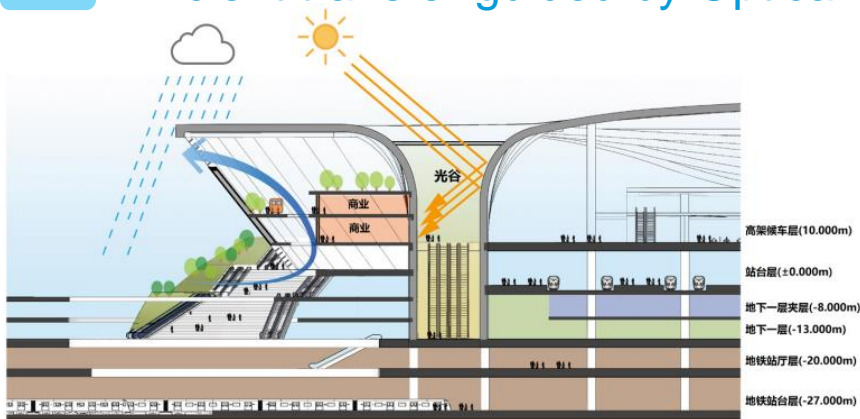


## 02 Variable capacity of breathing square

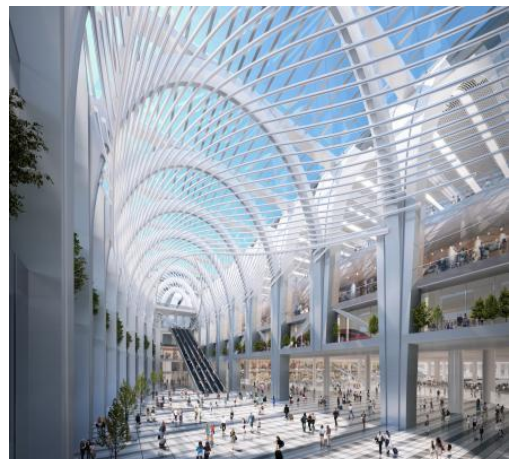
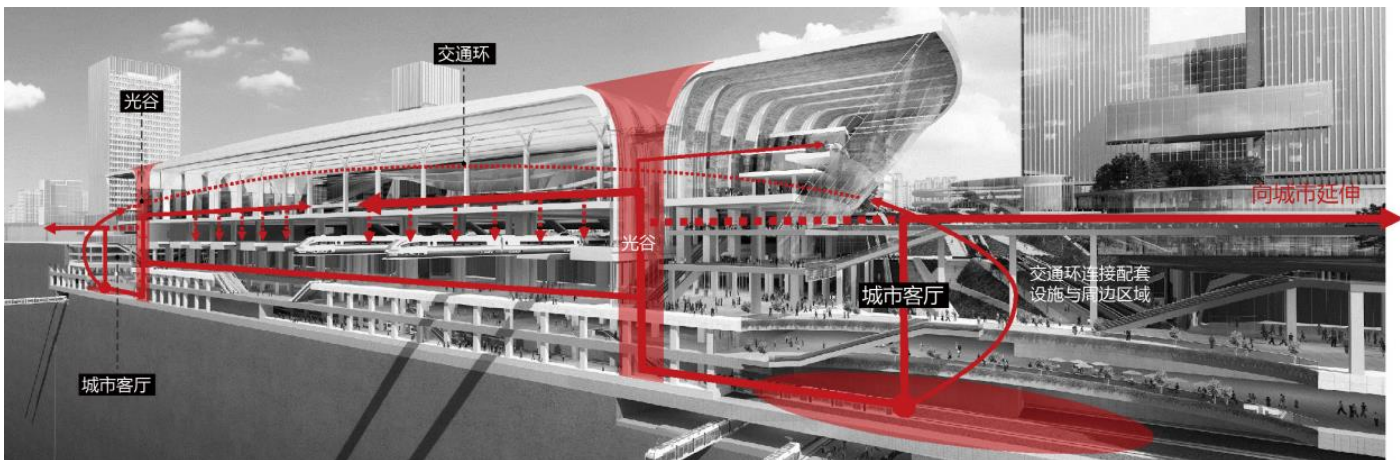
- The breathing square can be used as a comfortable and pleasant leisure landscape square
- During the peak passenger flow of Spring Festival and other holidays, the breathing square can be easily transformed into an extended elevated waiting room



### 03 Efficient transfer guided by Optical Valley



- Solving the problem of inconvenient transfer of railway and urban subway passenger flow
- Connecting -13.00m and 10.00m spaces directly.
- Serving 50% of the total number of people in the hub
- Semi indoor connection among the station, the surrounding traffic facilities and commercial space.



- Surpassing traffic function and integrating into urban life



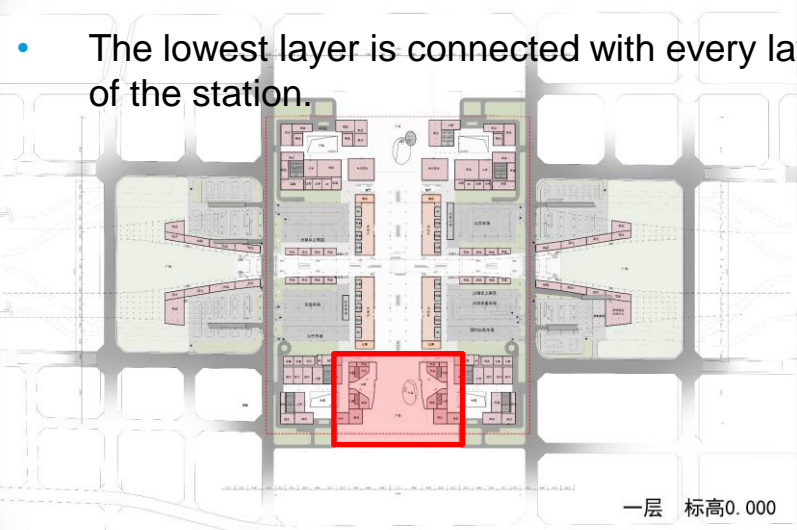
Hangzhou West station

## 01 Urban living room as a buffer for the station and city

- The concept of urban living room should be introduced into the new functional composition of railway station to increase the integration and avoid the sense of isolation of station and city.
- The unique shape of “Cloud Gate” shows "science and technology" and "Hangzhou charm"



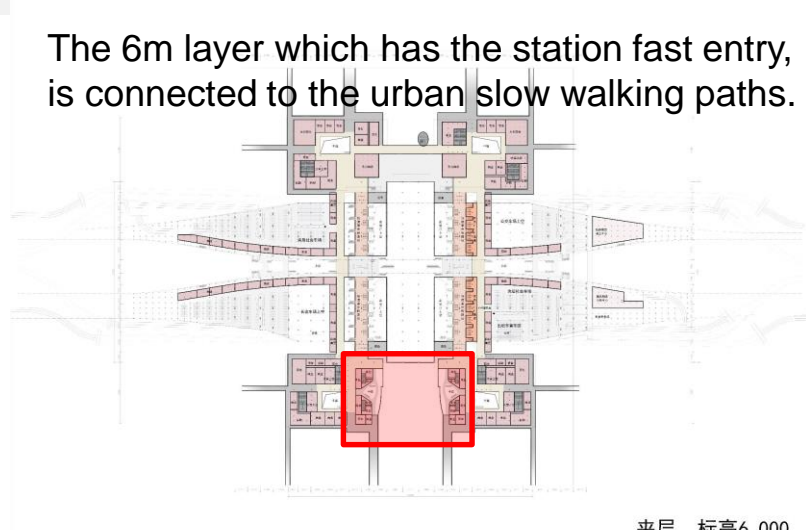
- The lowest layer is connected with every layer of the station.



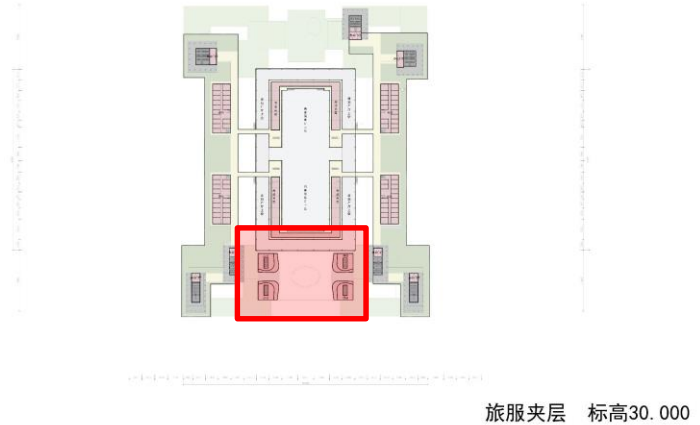
- The 24m layer connects with the greening roof and the property development above the railway yard.



- The 6m layer which has the station fast entry, is connected to the urban slow walking paths.

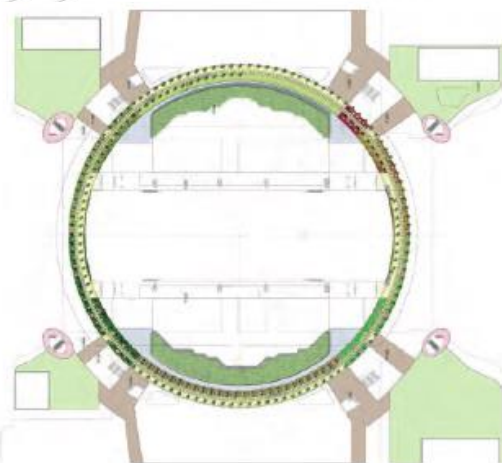
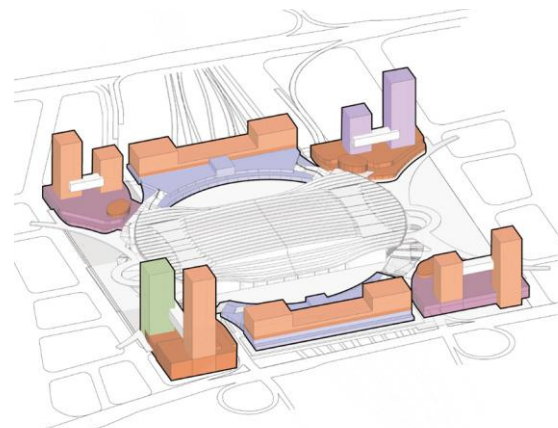
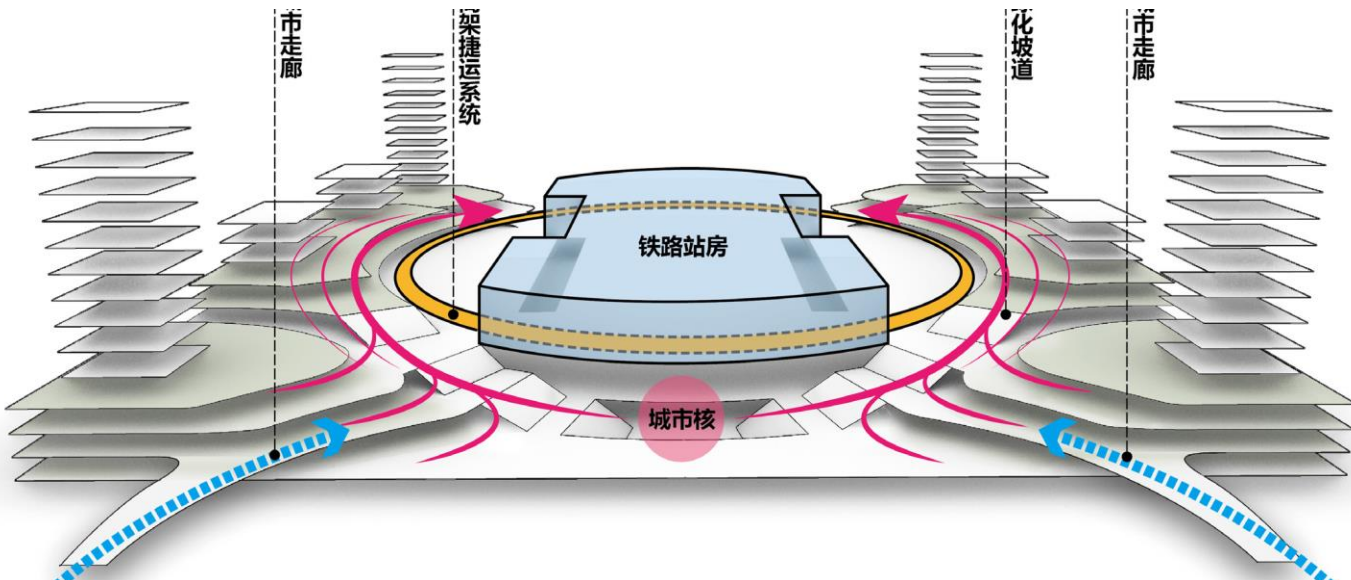


- The 33m layer is connected to the tourism service to form the urban vitality ring.



## 02 Multiple first floor and migratory commercial lines

- a comprehensive property development of 460000 m<sup>2</sup> above the railway yard
- The staircase square and circular footpath connect the underground, ground and above ground facilities in a migratory path, so that the hub forms multiple conceptual first floors, which can maximize the commercial value of each floor.





PART 03

Conclusion

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- To build a hub is to build a city. China's modern railway station is not only a place for people to travel and transfer, but also a "city booster".
  - The construction of railway station hub in the new era will become a strong engine for promoting the development of urban economy, and an valuable opportunity for urban renewal.





**Thank you**  
for your kind attention