

**Open Session WTC 2009**  
**Planning of Modern Tunnelling Projects**  
26May 2009 , Budapest



## **Underground Space**

## **Master Plan in ShenZhen China**

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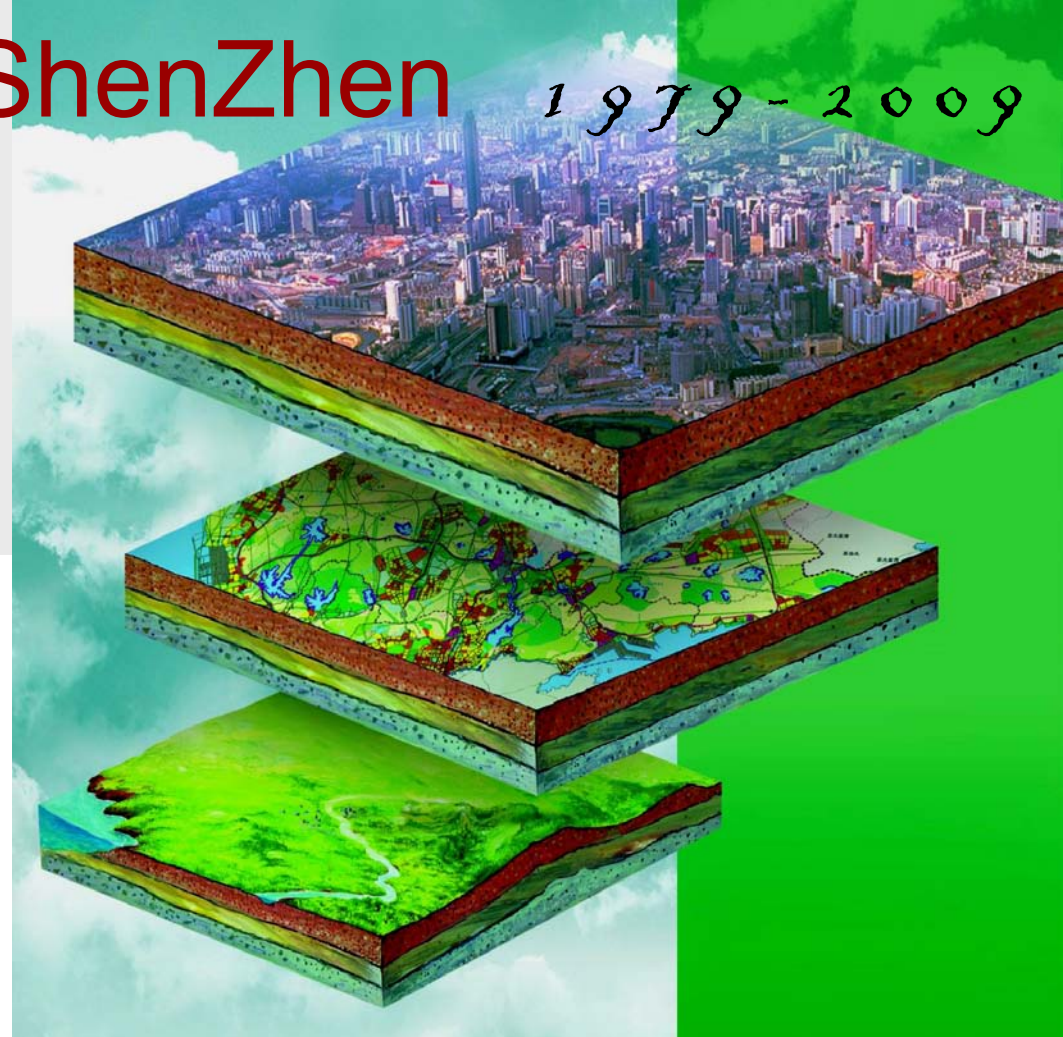
# Preface

- 1 . **What's the role of planning in guiding urban space development?**
- 2 . **Which role the government should act ,except planning**
- 3 、 **What else are needed?**

1

ShenZhen

1979 - 2009



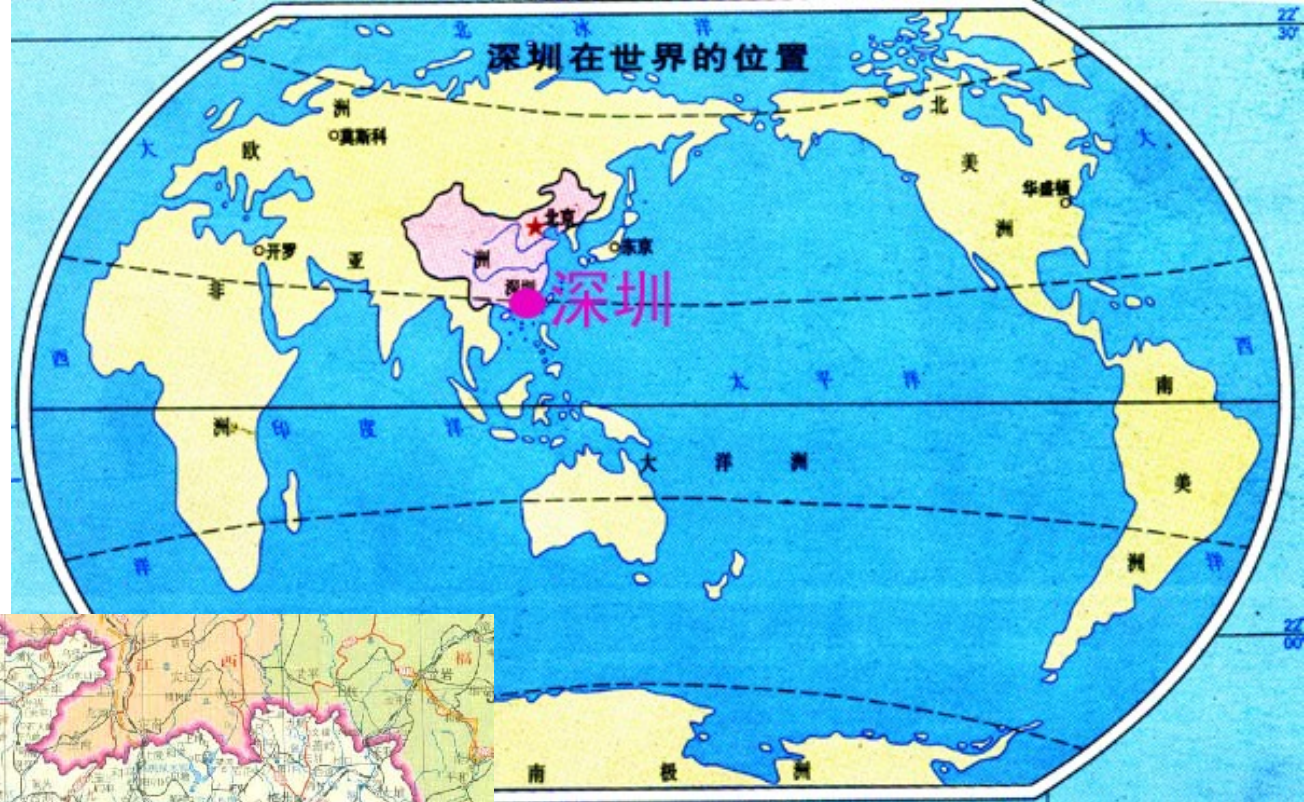
ation



A young and fast development city!  
With 30 years history



# The city's position



in the world



in zhujiang  
delta







# history of the development

the first street :ShenNan Road

**1979**

**1983**

**1984**

**1997**

**2008**





# Great changes

1995



1998



2005



2008



# 2

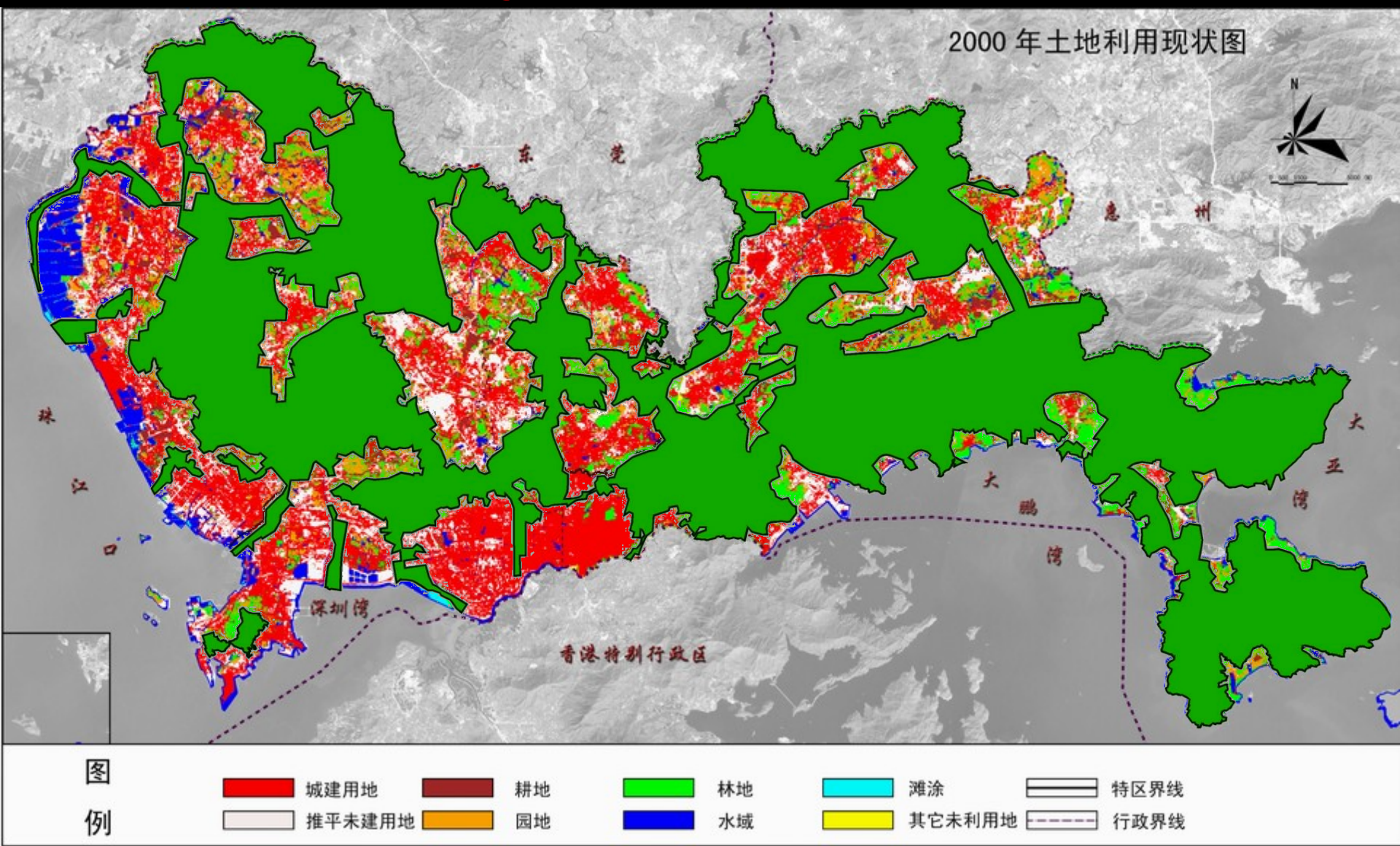


## Characteristics and Problems



# the conflict between development and land resource

## Government feel large pressure





# Development of the public traffic

more than 150km metro lines is bing build .

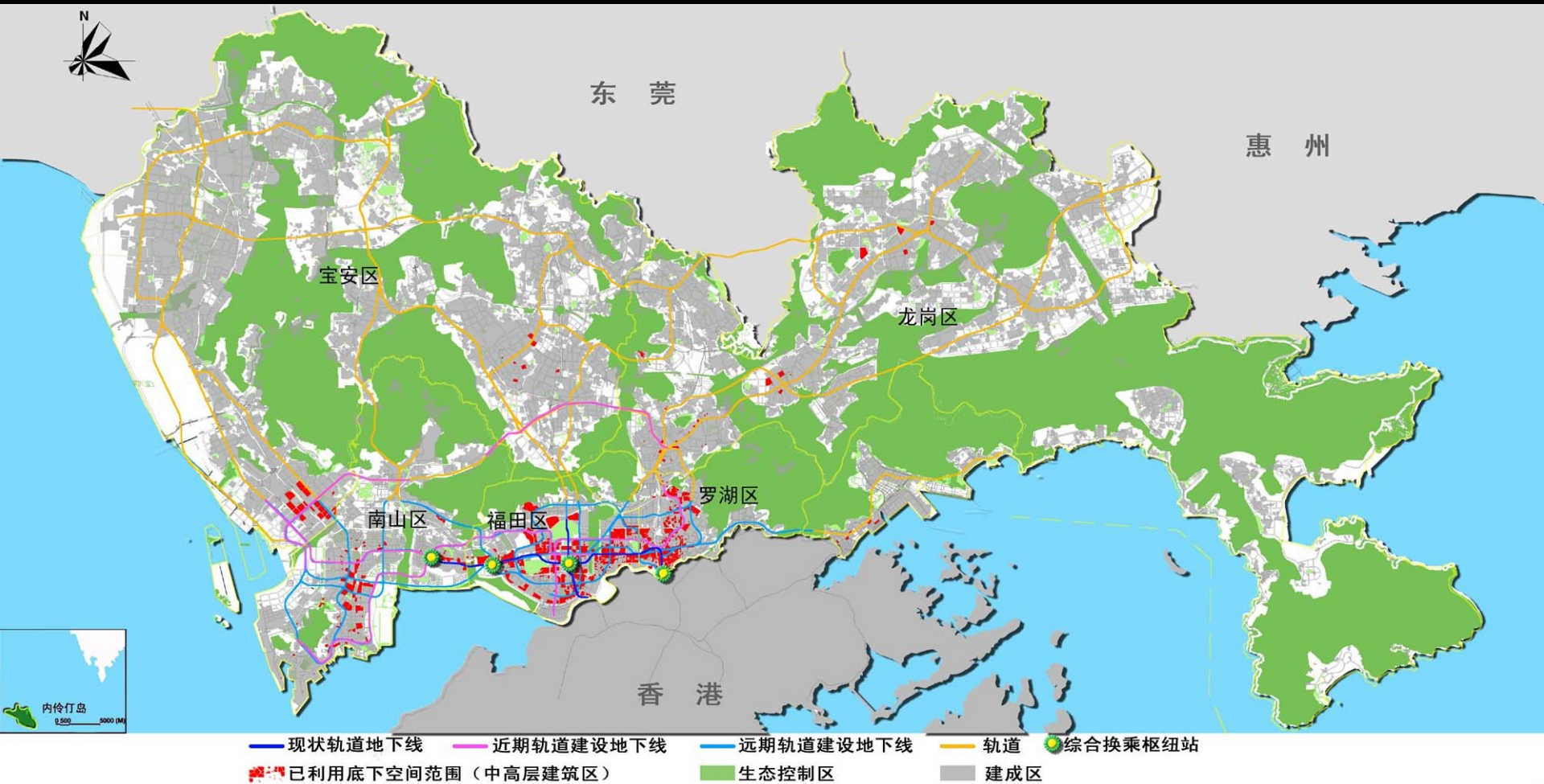
By the plan,the railway network is more than 500km in 2035.





subway caused the utilization

The red area shows underground space, near the phase I area.











The subway accelerated the reconstruction of CBD, improved the plot ratio of the areas around stations

many opportunities are created on utilizing underground space.



**The government considers the following issues:**

- ◆How to use the opportunities of subway construction to realize urban regeneration, upgrade urban infrastructure, integrate urban space, and increase efficiency?**
- ◆what principles should we follow, and what models should we choose to improve the land use more efficiently?**



3

**different locations**  
**different models**  
**Case Study**

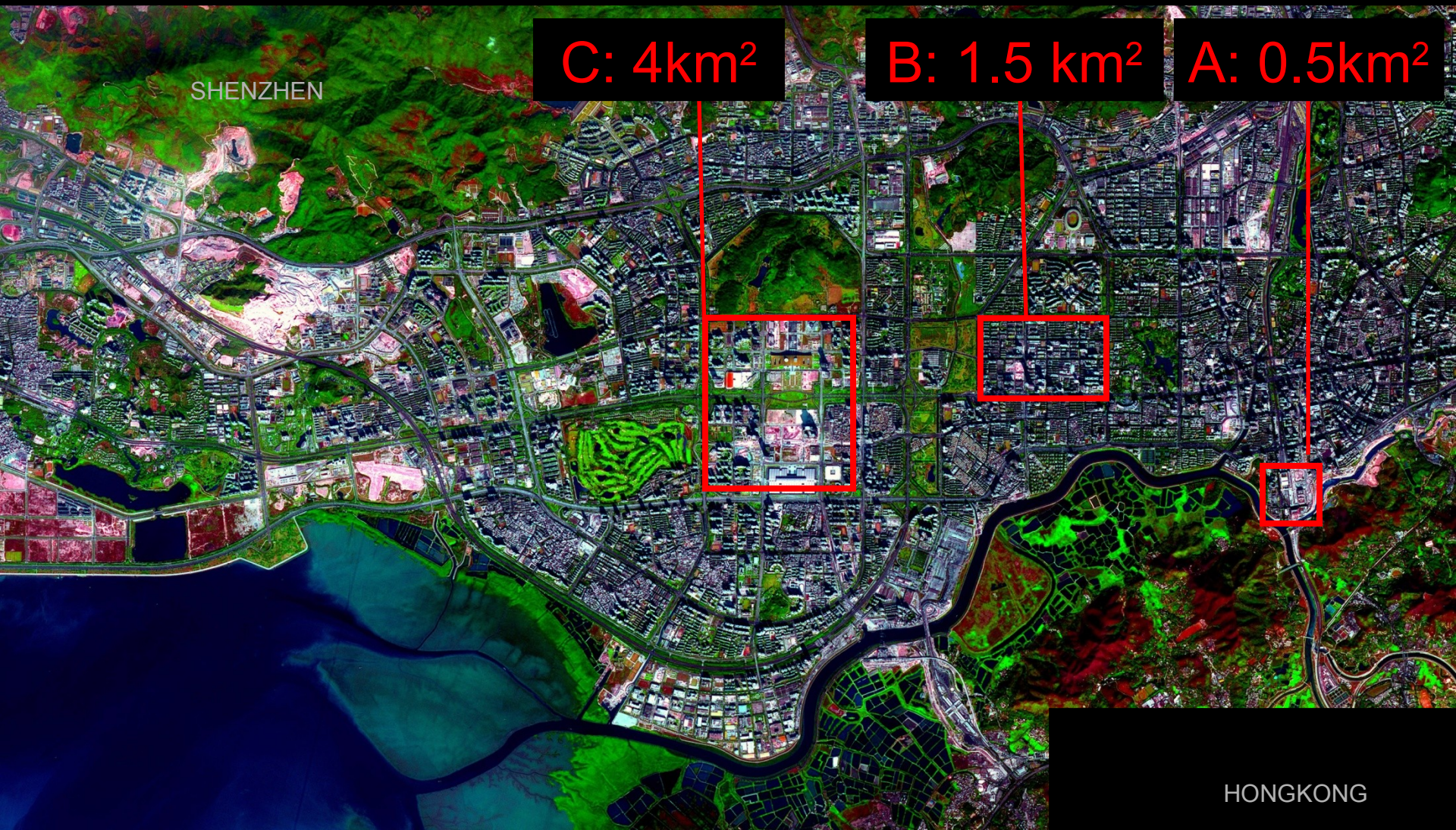




A: Comprehensive Transportation Hub (Luohu Customs Area)

B: Commercial District (North Huaqiang District)

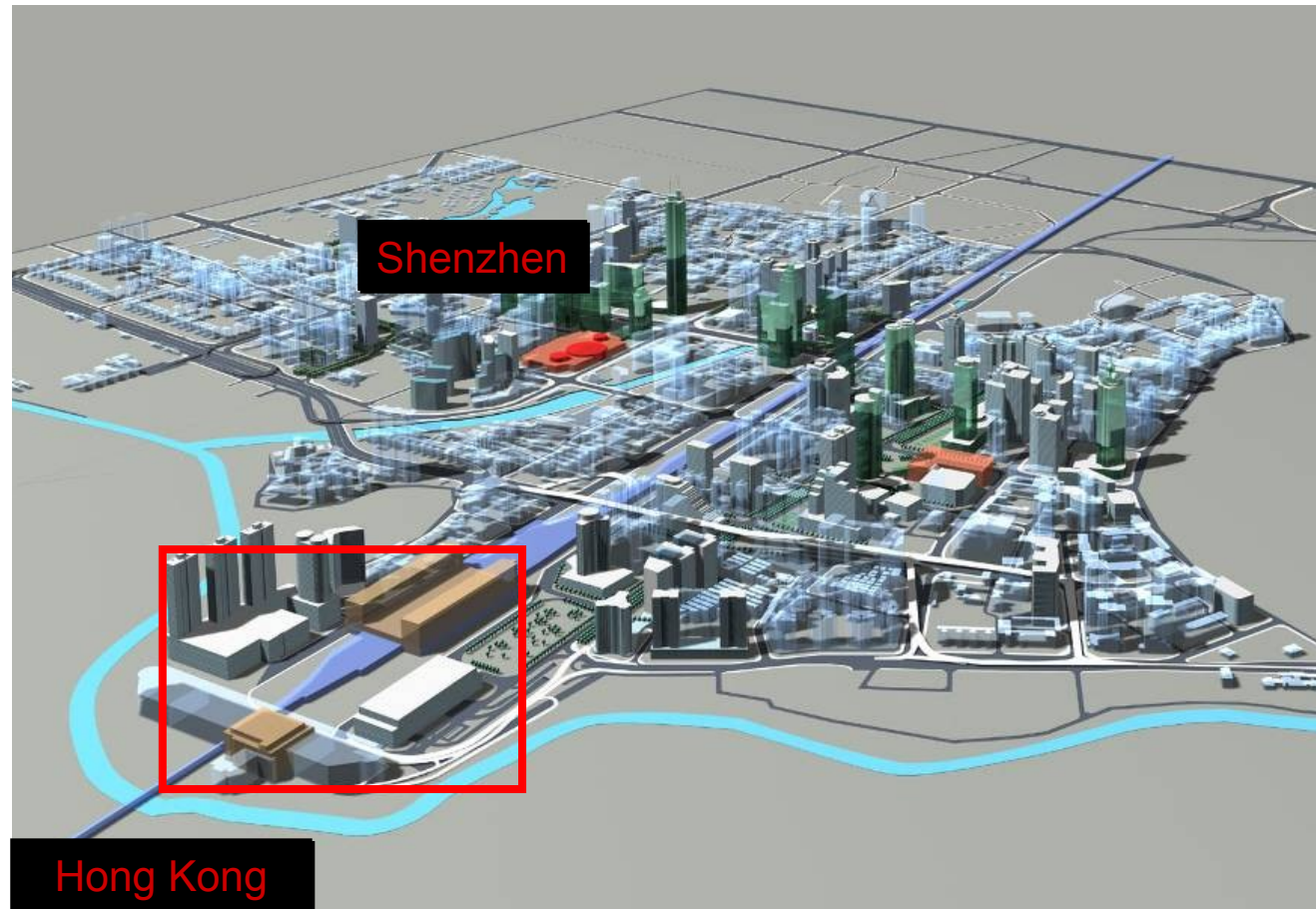
C: New Planned CBD(FUTIAN CBD)





# Case 1: The Redevelopment of Luohu Customs Area

The Luohu customs area is the transportation hub linking Shenzhen, Hong Kong, and the mainland. It also acts as an intra-city transit node.



# *The Redevelopment of Luohu Customs Area*

The construction of the metro provided an opportunity for improvement.







LuoHu Customs Area

**In this case, Success was due to three reasons:**

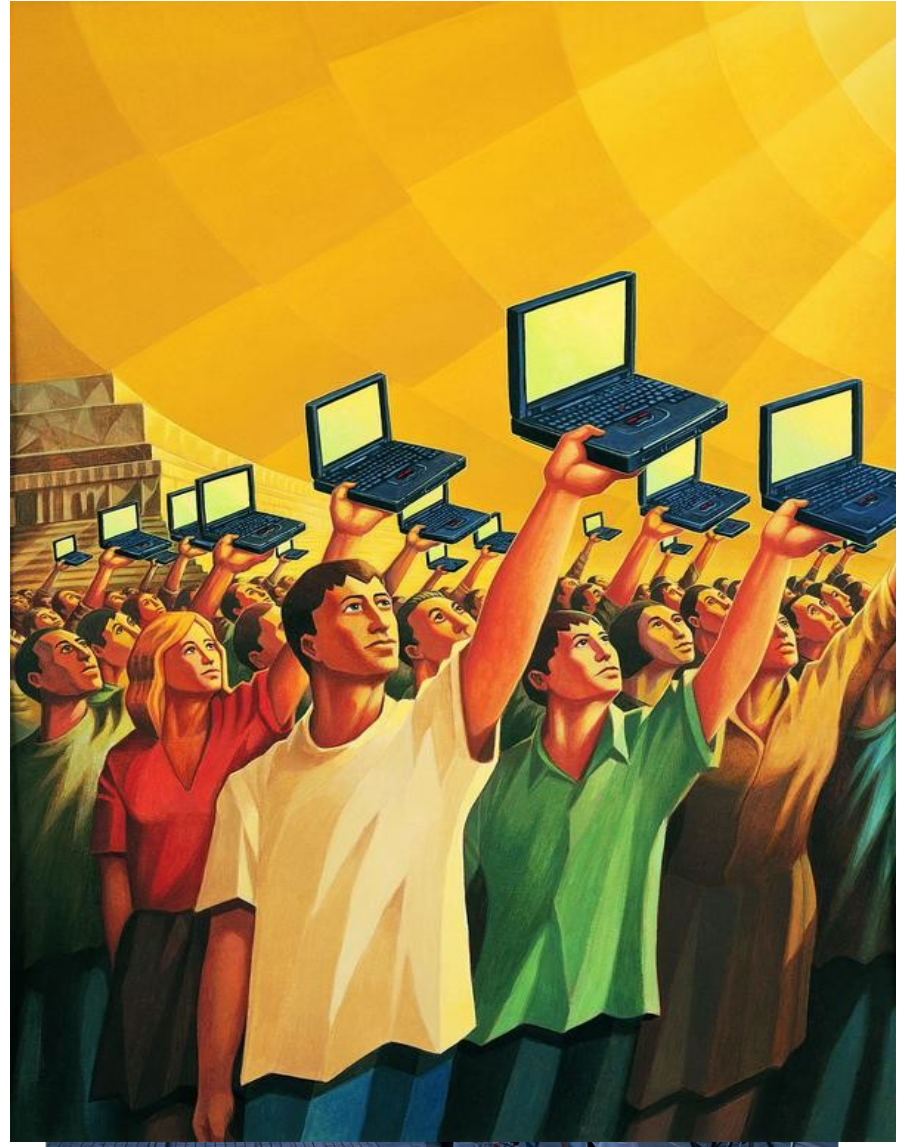
**(1) planning priority**

**(2) Using subway construction as an chance**

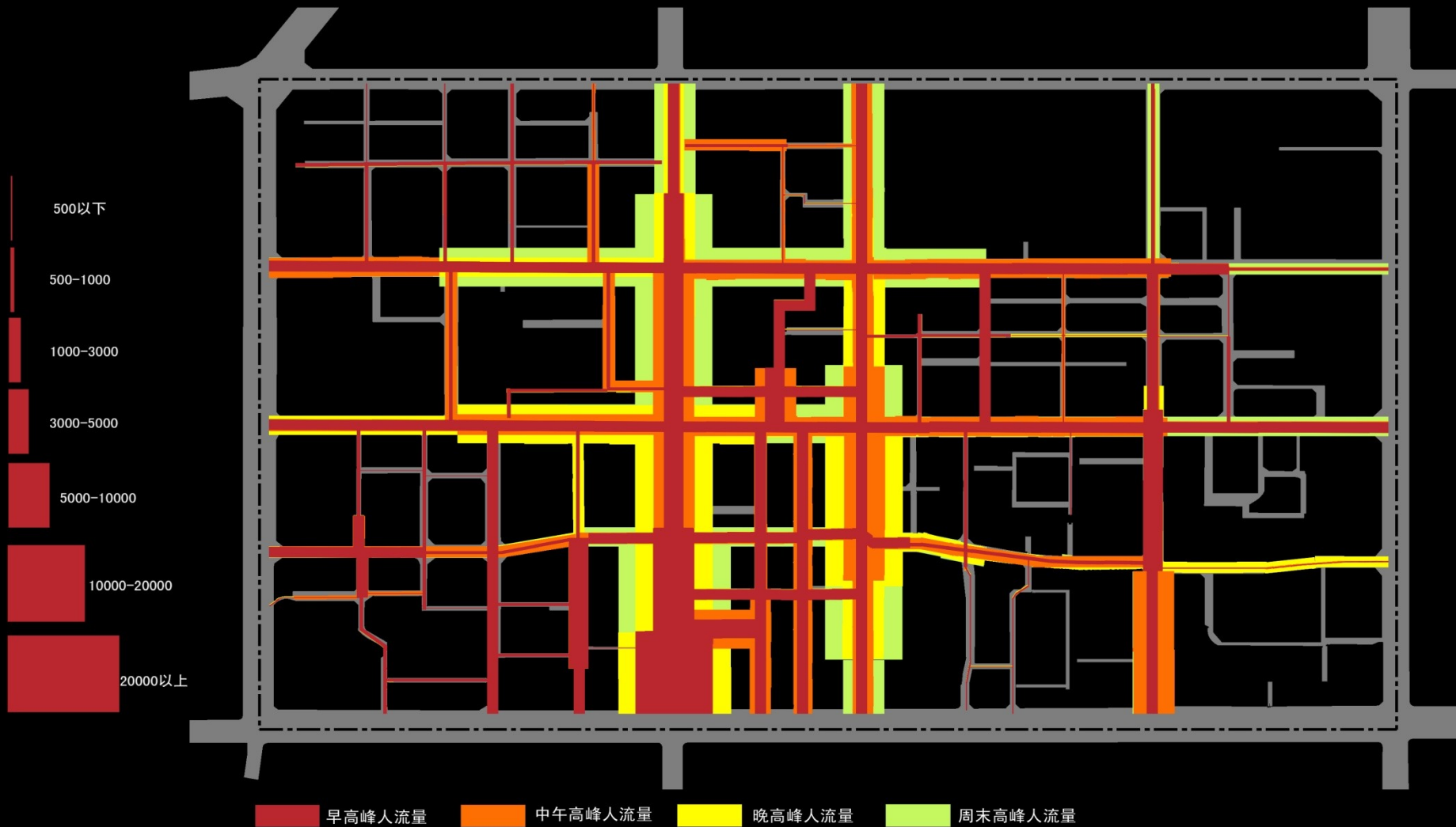
**(3) Government oriented redevelopment**



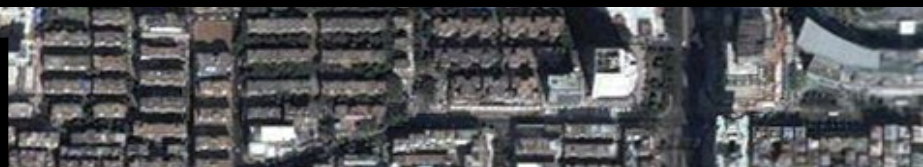
# *North Huaiqiang* District, the most famous electronic street in China.



1.45km<sup>2</sup>

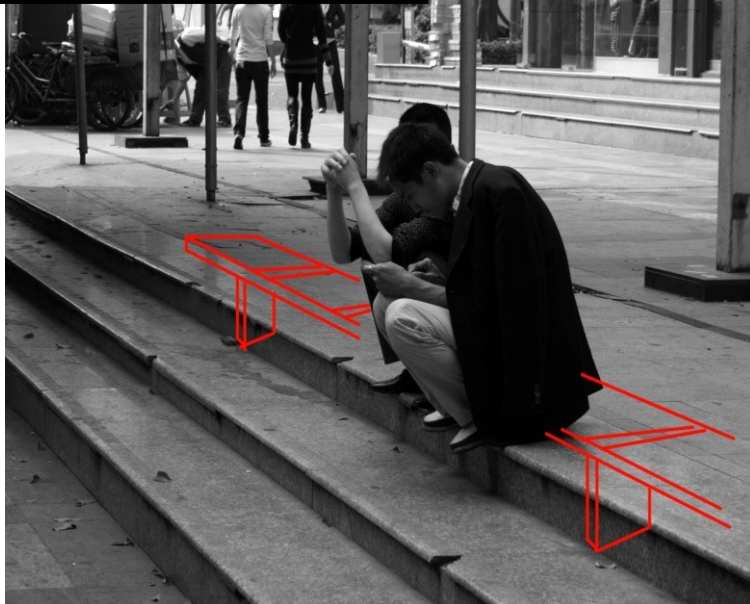


North Huaqiang District





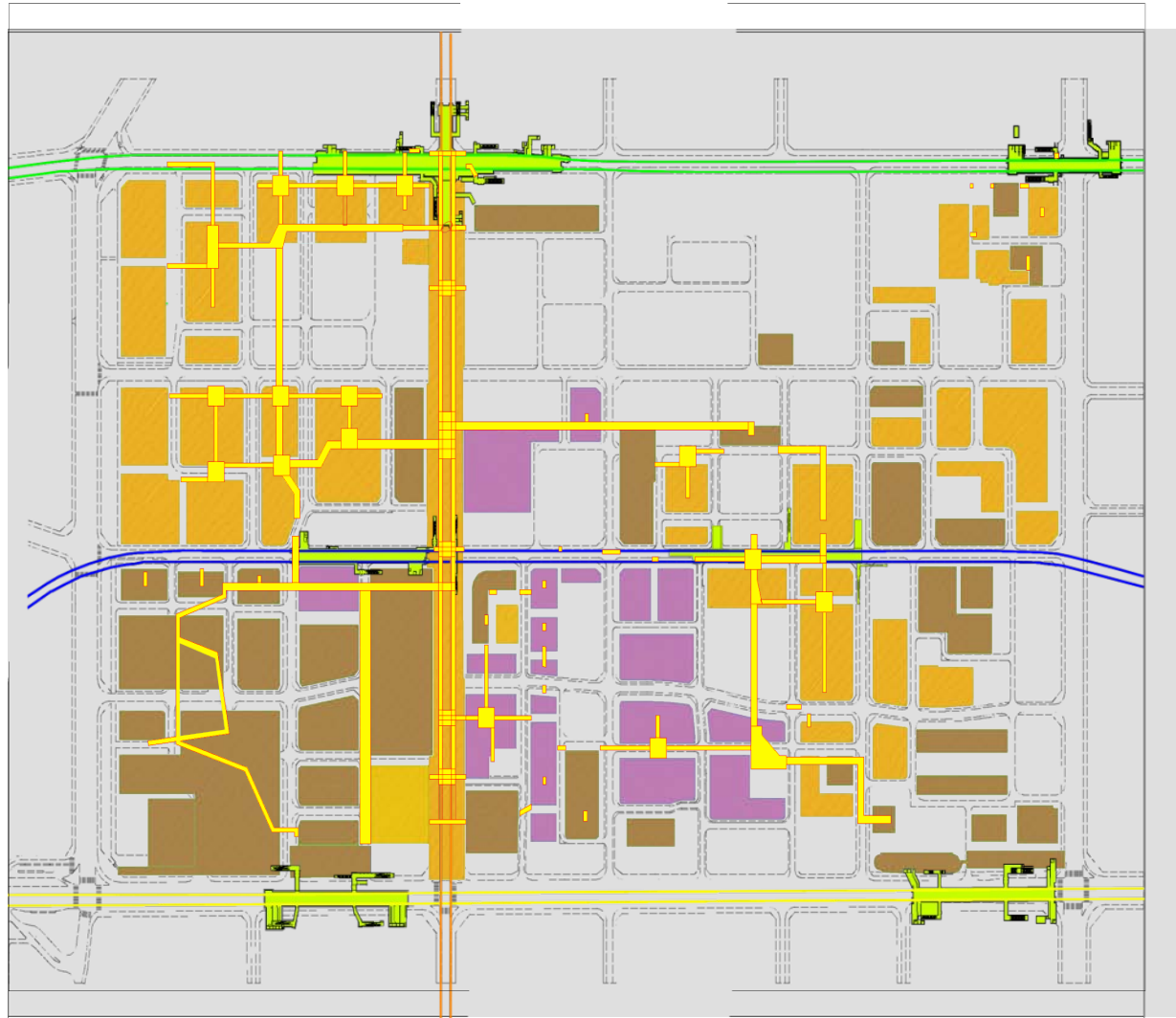
# Problems



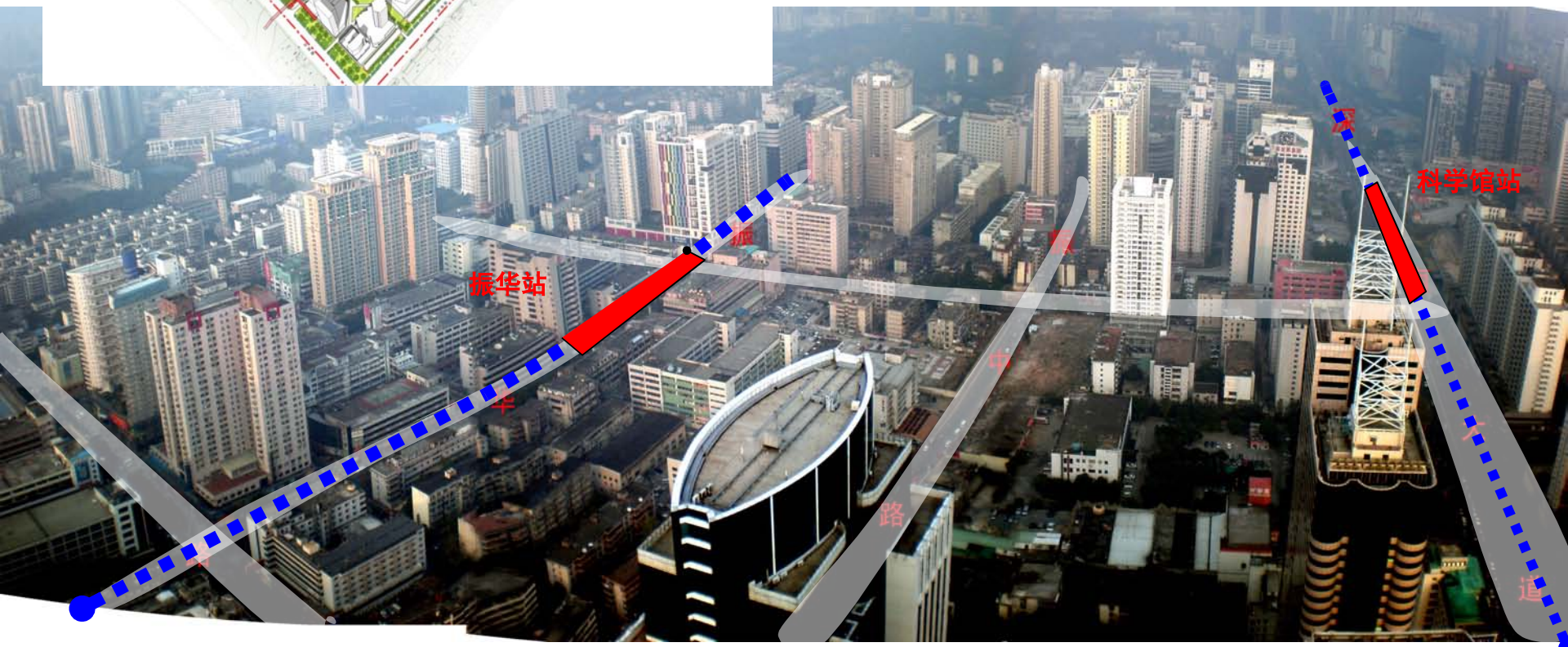
North Huaqiang District

## Huaqiangbei commerce area

Case 2:









## Case 3 *FUTIAN CBD*

**north : government office and  
residential area**

**south : central business area**

**1986 concept planning**

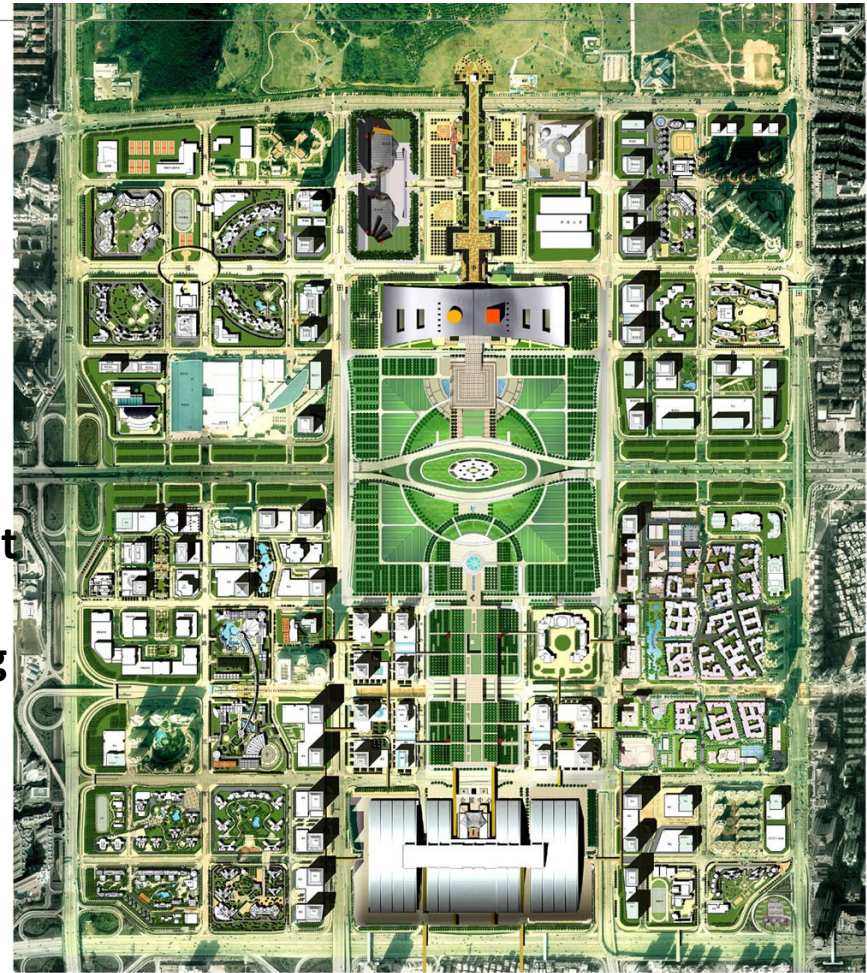
**1994 land planning**

**1996 international consultation**

**1998 put forward the complex green area concept at  
middle axes**

**1999 Urban design and underground space planning**

**2001 particular block design**

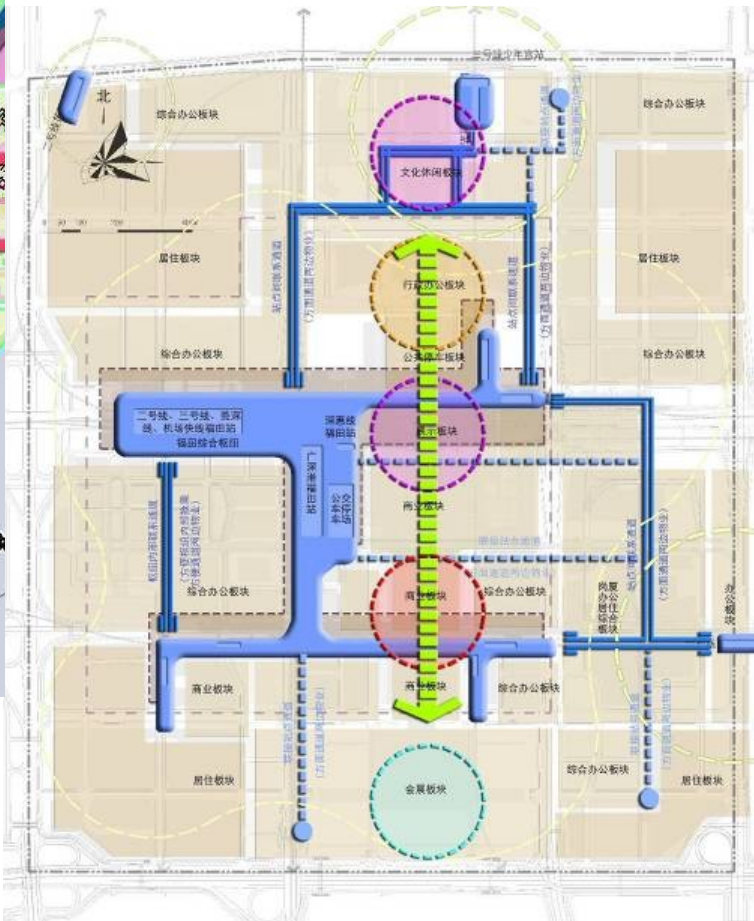




No agreement on each stakeholder is made, which caused the underground spaces are segment, although all underground space would be well-connected in the plan





[illegible]



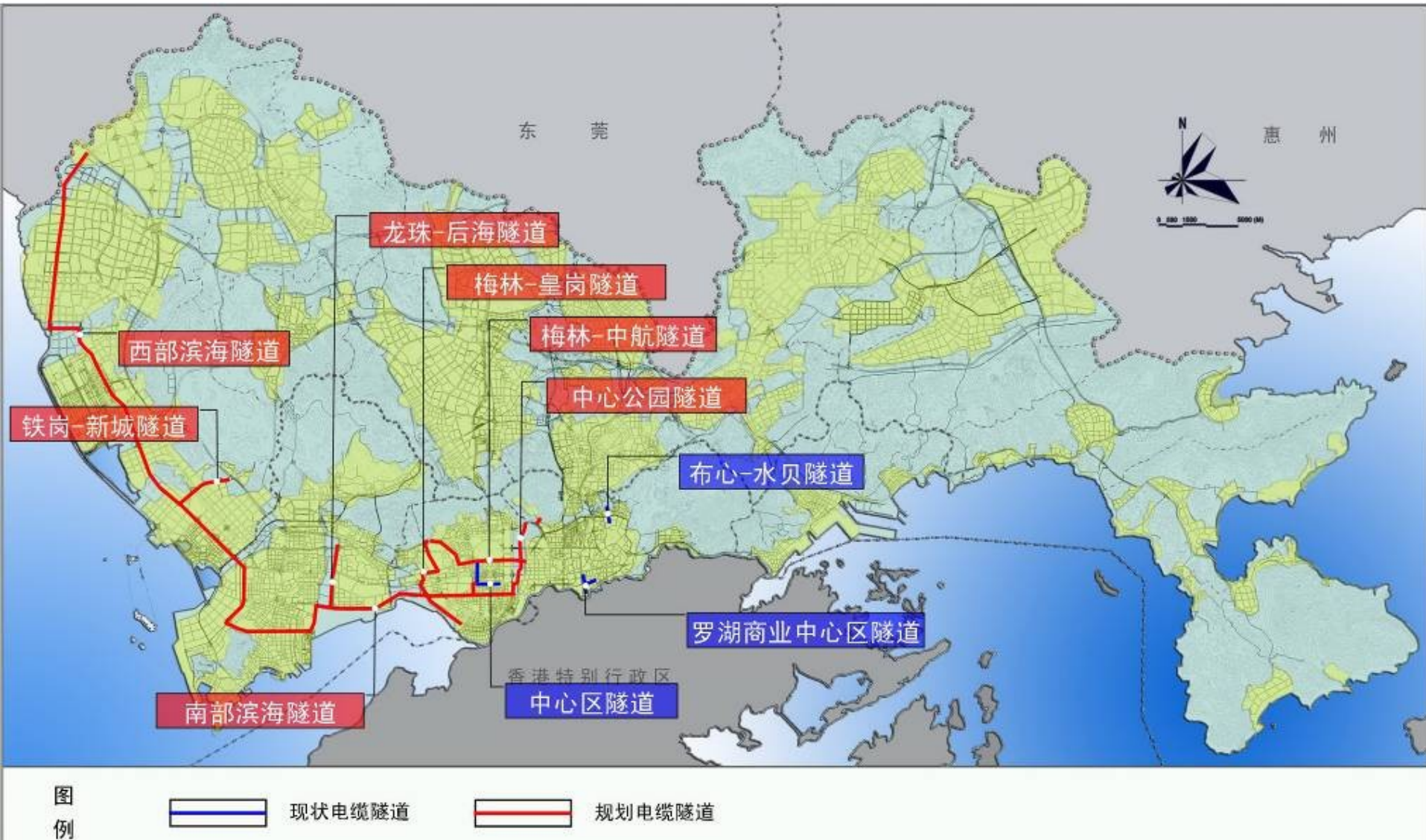
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## Strategies and conclusion



# Principles:

## 1.A Good Long-term Plan





Recent plan, completed in 2011 before.

At present, five subway lines, two lines of national railways, one inter-city railway, six integrated hub, with 11 municipal subway construction projects simultaneously, with a total of about 263 kilometers, a total investment of 100 billion RMB.



## 2 Use the opportunities of subway construction



metro line depot property  
development site



integrated transport hub





# Research and plan the land use near the station, suferce and underground



**The Donggang station,use the undergroundspace connect the building near the station**

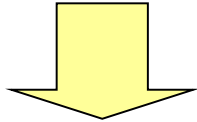


**The sea world station, the metro plan cause the redevelopment**



### 3. Public policy: contract among stakeholders

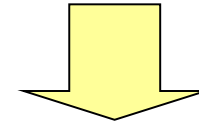
Government:  
Attempted to plan  
everything



Inefficiencies

**vs**

The Market:  
Uncontrolled growth



Mess

Thus, Public Policy now needs to balance the energy  
of the market and the intervention of the government



# conclusion

1 、 The underground development is a long , **comprehensive 、 cooperative work.**  
**Planning is the important guide.**

2 、 The government should play the main role in the establishment of the underground infrastructure network (Metro/underground roads etc.)

3 、 law and public policy is the key for success .

work is in progress ...



**THANKS**  
**for your attention**

***Welcome to shenzhen!***