New Exchange HUB trigger gateway regeneration

- Centrality of infrastructure for decentralized city services in Shenyang

2030: Future Problem

Population increase

Knowledge economy booming

New expansion plan

Shenyang: lack of services

Opportunity of west gateway under globalization: Transport HUB, Service decentralization, in-between working-living place

West Gateway: Articulation between Shenyang and global city (Beijing)

Greater accessibility to international market by others

Gateway of TV, film, communication and exchange mode

Shenyang: lack of services

- Increased heavy industry

Before 2003, China government paid more attention to the industry production but neglected the development of service sector in Shenyang

Defensive service sector

- Increased heavy industry

2.5 million to 5 million

4.5 million

1.6 QSPQEG

1.6

0.3

0.85

0.55

1.9361625

1904

Main port: Railway

Main port: Railwa

Metal

Oil

Services

Vacancy

Barrier

Fragmentation of local services

Road

2.5 Hours to Beijing by train

30 KM

25 min by air, 6 hours by highway

Centralization vs Decentralization

R&D, training, part time job

Finance, hotel, logistic, wholesale

Mall business, retail, craft

Research model: Couple services road

Focused service place along couple roads

Life change along couple roads

2.5 KM

Service gap

Millitary airport as block

Weak connection

Physical barrier

Interdependence but dispersal

Taxonomy of service

Satiation of service

Aim of research

Research model: Couple services road

Defined as the future exchange HUB

Definitive of Exchange HUB: Function vs Form

Office & shopping cluster = Function of Exchange HUB

Centrality of infrastructure

Hypothesis of solution: compact city with high quality service center

Exchange HUB (main action is centrality of infrastructure) can be as tool to trigger urban regeneration in West Gateway. Meanwhile, this Exchange HUB also can reinforce the physical, social and economic connection between West Gateway with city historical centers.

West gateway:

Problem of site: Why need urban regeneration

(in-between gateway and city center?)

Solve problem

Definition of Exchange HUB in Shenyang: Function vs Form

Office & shopping cluster = Function of Exchange HUB

Centrality of infrastructure = Form of Exchange HUB

- Before 2003, China government paid more attention to the industry production but neglected the development of service sector in Shenyang.
- Afterwards, the huge opportunity of city expansion, but problems. Therefore, the aim of this research will be different from traditional research of urban regeneration, but try to combine opportunity of economy booming with the huge opportunity of city expansion, but problems. Therefore, the aim of this research will be different from traditional research of urban regeneration.
- First of all, China is facing the huge opportunity of economic transformation since 1970s. Under this background, China’s urbanization process was rapid, which the urbanization rate increased from 19% in 1970 to 51% in 2014. Nowadays, economic growth is not just the stimulus to China’s urbanization, but also the driving force behind the urbanization process. Moreover, the huge opportunity of city expansion, but problems. Therefore, the aim of this research will be different from traditional research of urban regeneration.
- There are several important factors that can help the urbanization and service sector development:
  1. Centrality of infrastructure
  2. Service decentralization
  3. In-between working-living place

- In order to reflect the huge opportunity of city expansion, but problems. Therefore, the aim of this research will be different from traditional research of urban regeneration.
- Finally, urban regeneration is the destination of this research and design. However, in order to achieve urban regeneration, we cannot control the whole process of urban regeneration. Therefore, we need to intervene on the problems as my focused points (fundamental form and basic layer above ground) and I hope the actions on infrastructure can trigger a series of urban transformation: spatiality and society, large number of population and higher density of land use in the cities of China. The research elements can be summarized to be "cluster", "flow", "centrality" and decentralization in order to reflect the huge opportunity of city expansion, but problems. Therefore, the aim of this research will be different from traditional research of urban regeneration.

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**New Exchange HUB trigger gateway regeneration**

**Strategic Plan**
- Exchange HUB
- New connection
- Triggered urban regeneration
- New metro
- Old metro

**Urban regeneration**
1. Re-housing illegal settlement and remove heavy industry
2. Zoning: Separated & Mixed function
   - Zoning 1: Exchange function rely on business airport
   - Zoning 2: Government
   - Zoning 3: Buffer zone for separate zone (no noise area)
   - Zoning 4: Mixed use

**Design of key project:** Platform as container of exchange

**Compact city:**
- Global-local diversity life
- Working-living integration
- Social health development

**Compact city:**
- Transform west gateway to be sub-center and transport HUB where infrastructure and public transport centrality

This north-south exchange Hub (black) can integrate airport, metro, road network together and easily to connect with surrounding neighborhood. This is the meaning of triggering urban regeneration.

This HUB will attract more and more flow to improve spatial environments.

**SPECIALIZED FUNCTIONAL DISTRICT**
- Airport related program
- Multilayer transit for efficient exchange
- High density mixed use architecture & landscape integration

**Legends**

- Green connection
- Ex: Advanced producer services and shopping mall cluster
- A: Service exchange road
- B: Landscape road with local services
- C: Daily living road
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