The origin of concept?

The Transit Metropolis / Robert Cervero
Outline

1. Background: System, Concept, Status quo
2. Policy Design: Norm, Policy and Subsidy
3. Next Focus: Key Solutions
1 Background: System, Status quo, Concept

• System: Structural Reform
  • MOT has undertaken the responsibilities on urban public transportation since 2008, formerly managed by MHURD
1 Background: System, Status quo, Concept


- Speed in Peak Time
- Crowding Degree
- Seperated Lane
## 1 Background: System, Status quo, Concept

<table>
<thead>
<tr>
<th>BUS Development</th>
<th>Influence Factors</th>
<th>Related Management Sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>External conditions</td>
<td>Traffic congestion</td>
<td>Multi-sector</td>
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<td>Station land</td>
<td></td>
<td>Planning and land sectors</td>
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<tr>
<td>Financial subsidy</td>
<td></td>
<td>Finance Bureau</td>
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<td>Ticket system and price</td>
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<td>Price Bureau</td>
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<tr>
<td>Operational surroundings</td>
<td>Separated lane</td>
<td>Traffic management sector</td>
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<td></td>
<td>Priority of traffic light</td>
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<td></td>
<td>Operation of bus lines</td>
<td>Transport sector</td>
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</tbody>
</table>
The total length of urban rail transport in China was more than 2,500 kilometers in 2013, covering 19 major cities and increasing 7 times compared with 2003.
• Challenges of urban rail development

• Rail system is more like an exterior component rather than being innate in urban development

• Seriously lacking integration with land use and other transport systems

  • Beijing: limited impacts of rail development on improving road traffic conditions, despite of 4 times growth in length compared to 2004

Change of road traffic conditions between 2007-2012 in Beijing
1 Background: System, Status quo, Concept

- Two big changes of Concept by Ministry of Transport
  - From priority of public transport to Transit Metropolis
  - From transport sector to multi-sector, city government
2 Policy Design: **Norm**, Policy and Subsidy

- Started in 2011

- Norms of city selection
  - Resident population over 1.5 million
  - National highway transport hub
  - Better development of public transport with regional features and demonstration effect
- **Indicators in five-year plan**
- Motorized mode share in public transport (more than 60%)
- Coverage of public transport station in central areas (100%)
- Bus operation speed in peak time (more than 18 km per h)
- Green bus percentage (more than 50%)
- Mortality rate (less than 0.04/million vehicle km)
- ......
37 Pilot cities of Transit Metropolis approved by MOT
2 Policy Design: Norm, Policy and Subsidy

• Central Government Policies

• Instruction of Public Transport Priority Development
  Issued by the State Council (2012)64
  • Bus purchase tax exempted
  • Electricity price discount
  • Comprehensive development in station areas
2 Policy Design: Norm, Policy and **Subsidy**

- Subsidies for Transit Metropolis by MOT
  - Integrated transport hub
  - Intelligent public transport system
  - Bus rapid transit monitoring
  - green bus like CNG or LNG
3 Next Focus: Key Solutions

• Promotion of mode split in public transportation
  • Rail transit oriented city development (Shenzhen)
  • Multi-level bus service (customized bus) (Beijing)
  • Convenient urban rail system (short-distance transfer, bike-sharing (Hangzhou))
  • Information service of public transport (Ningbo)
• Integration of land use and rail transport
  • Mixed, Compact and Dense Land use
  • Public transport communities
  • Right-sizing and Parking Policies
  • Shift of Transport Options

• Innovation of funding and financing pattern
  • Comprehensive development in station areas
  • More involvement of PPP in rail construction projects
Shenzhen’s Paradigm

Current Policies:

• More mixed land types and higher floor-area ratio are encouraged in subway station areas

• New rail development can realize the financial balance of construction, operation and maintenance without any subsidy

• 50% of affordable housing is from comprehensive development of subway station areas
Qianhai Subway Depot

<table>
<thead>
<tr>
<th>Land Area</th>
<th>Floor area (ha.)</th>
<th>Land Type</th>
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<tbody>
<tr>
<td>47</td>
<td>141</td>
<td>Affordable Housing 45%</td>
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<tr>
<td></td>
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<td>Commodity Housing 55%</td>
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<td></td>
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<td>Housing; Office; Commerce</td>
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