Public Transportation Management in China

How can the growing travel demand of 1.4 bil. people be managed?
Sustainable Development
Agenda

• Introduction
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• Different Systems
• How can public transportation in China be managed?
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Introduction

• Public Transport: all systems to get people from A to B
• Organized by: public or private (or public-private)
• Large range of service areas, organizational effort and safety issues
• Most populous country in the world, growing economy → higher demand for transport
Current Situation - Where to place public transport?

- Infrastructure (hard- and software) as well as employees
- Different approach in different cities
- Trend: more individual, more flexible

Diagram:
- Individual person
- Non-organized
- (Strictly) planed
- Car, Walking, Bike
- Bus
- Taxi
- Train, Airplane

Sustainable Development
Current Situation – Public Transport in China

• Mainly planned by government (5 year plan)
• Infrastructure Investment (high investment, high prestige)
• Densely populated areas vs. rural areas
• Diverse, not interconnected systems
  – Some areas: public transportation card
• Different level of support and guidelines needed
Facts & Figures

Most populous country in the world
3rd largest country by area
Expanding Urbanization

- Air: >500 Airports, 27 airlines, by 2020: 4000 airplanes
- Road: largest highway system worldwide, carries approx. 50% of all passengers, motorbikes vs. luxury cars
- Rail: largest high speed railway system

High demand for effective Public Transportation Management
Different Systems (I)

Category: Air
Operated by: Pilot, very high
Range: high
Costs User: low to high, high
Cost Operator: high, very high
Safety level: very high

Category: Road (taxi)
Operated by: Driver, low
Range: low to medium
Costs User: low to high, high
Cost Operator: medium, low
Safety level: medium

Category: Road (bus)
Operated by: Driver, medium
Range: low to medium
Costs User: low, medium
Cost Operator: medium
Safety level: medium
Different Systems (II)

Category: Rail (subway)
- Operated by: City owned
- Range: low to medium
- Costs User: low
- Costs Operator: medium
- Safety level: medium to high

Category: Rail (train)
- Operated by: State owned
- Range: medium to high
- Costs User: medium to high
- Costs Operator: high
- Safety level: high

Sustainable Development
How can public transportation in China be managed?

• Different demand (usability, range, price,...) different systems

• No need for costly safety measurers in non-critical areas (high cost saving potential)

• strong state influence top-down approach, although growing influence of private organized companies
Challenges

• Growing pollution problem need for sustainability

• Peak time demands (daily and seasonal)

• urban vs. rural (investment focus)
Case Study: China’s High Speed Railway

• Largest High Speed Railway system worldwide (19,369 km in Dez. 2014)
• Political support, rapid expansion
• Growing Chinese expertise in technology sector (more jobs, less dependence on foreign companies)
• Better connection of populous coastal area to rural western part
Strength & Weaknesses

Better, faster and easier domestic travel
Cheap and environmental friendly mass transport
Strong infrastructure investment

Fast expansion may lead to planning problems
Higher prices (in some cases) may lead to decrease in affordability
<table>
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<tr>
<th>Opportunities</th>
<th>Threats</th>
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<td>Creating a completely new safety and organization system</td>
<td>Decrease in passenger numbers due to growth of air travel</td>
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<td>Transportation system for the whole country</td>
<td>Too strong focus on only one area</td>
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Conclusion

• Diverse demand more flexible solutions needed (e.g. Apps, real-time info,...)

• Higher travel demand capacities should be planned ahead across all systems

• Overall growth across all areas interconnected public management and safety system needed (political support)
Thank you for your attention !!
谢谢！
Sources

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