Prospective of Urban Matro Transit Development in China

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Meet for travel need

Stimulate Economic growth

Shaping city layout

Reduce traffic congestion

Urban rail is the backbone of the city

1 billion investment in urban rail infrastructure can generate 2.6 billion GDP and 8000 jobs.
Metros operate in thirteen cities in China mainland.

Current status - fast growing sector

Urban rail passenger trips in 2010: 5.36 billion
mileage: 1452 kilometers

- Metro: 1197 kilometers
- Light rail: 167 kilometers
- Magnetic: 29 kilometers
- Monorail: 19 kilometers
- Tram: 40 kilometers

(by the end of 2010)
Current status- fast growing sector

a mainland, urban rail is more than 160 kilometers per year in the last 10 years.

Shenzhen has been grown with urban rail

- 1000 billion RMB will be invested by 2015.
2. Challenges and Key issues
2.1 Meet the Challenges for higher demand of urban rail in megalopolis

Sep. 17, 2010, Beijing
Safety and security problems

- Policies
- Investment
- Technology such as ITS
- Intuitional framework
• Lower density in center area while ignoring of suburb rail development

Suburb rail
London: > 3600 km
Tokyo: 1900 km
Beijing: 82 km
Guangzhou: 0
Shanghai: 0

Coverage
London: 1-2 km/km2
Beijing: 0.51 km/km2
2.2 Coordination from planning to operation

- It is difficult for operation sectors to coordinate project acceptance process for the trial and normal operations.
- Some Transfer stations failed to meet passenger demand, even some newly opened stations. Local governments have to make large investment in upgrading transfer channels, entrances, platforms.

**Urban Rail Transit**
- Responsible for the construction standards of urban rail projects.
- Responsible for operation supervision of urban transit including urban rails and buses.

**NDRC**
- To determine whether a urban rail project is approved.

**MOHURD**
- MOHURD

**MOT**
- MOT
2.3 Financial sustainability?

Operation subsidy

Low Ticket Price

- Beijing, 2 RMB
- Shanghai, 2.52 RMB
- Shenzhen, 2.78 RMB

*Based on 2009 data*

Government Subsidy

- **Beijing**
  - 1.52 billion in 2009
  - 4.50 million/km

- **Guangzhou**
  - over 0.1 billion per year from 2009
  - 0.44 million/km
2.4 Lack of experience in operating with human resource management, etc.

The first urban rail lines will be opened in 15 cities in next five years.

We will need about 0.3 million personnel in 2020.
3. Policy Recommendation

- Policy
- Laws and regulations
- Standardization
- Technologies
Key procedures

- Planning and construction
- Trail operation
- Operation
- Emergency response

Safety and efficient services
### 3.1 Planning and construction

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<td>Operators should participate in the planning of urban rail project.</td>
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Operators should participate in the planning of urban rail project.

Traffic and Transportation sectors offer suggestions about the planning & design program.

Measures for operation Safety assurance in the process of design and construction.
3.2 Trial operation

Strictly comply with the basic requirement policy for operation to make sure the safety operation.

3.3 Operation

- Operator is the main body to responsible for operation safety
- Safety assessment regularly
- Risk management
3.4 Emergency response framework

- Local government lead to set up emergency traffic center immediately.

Emergency response plan:
- Leaders and working teams
- Reporting & communication
- Materials, equipment & technology
- Implementation measures
- Recovering operation
- Information dissemination
Cooperation potential

- Capacity building: eg. training, exchange and knowledge sharing
- Standardization, particular in safety and service quality
- Technology transferring
- Project cooperation
China Academy of Transportation Sciences

CATS
established in 1960 with over 700 professionals and 11 research divisions
Supervision: Ministry of Transport & Ministry of Science and Technology

Research Divisions

- Transport Development Research Center
- Transport Information Center
- Environment Protection and Safety Research Center
- Transportation Technical Consulting Center
- China Urban Sustainable Transport Research Center
- Logistics Research and Development Center
- Road Structure and Material Development Center
- Transport Economics and Financing Institute
- Standards and Measurement Research Center
- Information Research Center
- Information Technology Center
China Urban Sustainable Transport Research Center (CUSTReC)

- CUSTReC established and supported by Volvo Research & Education Foundation (VREF) in 2005 with 23 staff as sub-division of CATS

Activities:
- Research & development
- Training & education
- Dissemination & comm.

To be an international center of excellence for sustainable transport in high growth cities.
Change on March 2008 from MHCRC to MOT

A think tank to provide policy decision making and technical support to the central, MOT and the local city level.
Activity Highlight

- Draft the National public transport regulation
- Guideline for transport institutional reform in Chinese central cities
- Urban transport database construction
  And public transport efficiency evaluation
- TDM measures for Beijing Olympic Games” and result evaluation
- Outline of urban passenger transport planning for the Twelfth-Five year plan
Thank you for your attention