

Manila Policy Dialogue on Environment and Transport in the Asian Region

Session 5: Environmentally Friendly Public Transport Planning

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Introduction

- Public transport contributes for EST by providing alternatives for automobile use
- Importance widely accepted and addressed by Asian Policy Makers: e.g. Nagoya Statement, Seoul Declaration
- High potential for public transport in Asia and challenges in the face of growing motorization

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Current Status of Public Transport in Asia



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Need for Public Transport in Asia

- Merits of Public Transport: reduction of automobile use, efficient transportation in cities, wide consumer options and greater equity, efficient land use, etc.
- Introduction of public transport still limited in Asia and generating problems.
- Appropriate strategies to provide adequate sustainable public transport needed.

Current Trends of Public Transport in Asia

- **Initiatives for rail-based systems**

Attempts for rail-based transit development seen in many countries

- **Improvement of public transport**

Introduction of premium bus services, advanced technologies, etc.

- **Private sector participation**

Private sector plays a greater role in developing public transport

Challenges in Asia

- Rapid motorization
- Lack of adequate public transport
- High cost of investment in MRT
- Dissatisfaction with public transport quality
- Accessibility of the disadvantaged groups
- Demands due to urban sprawl

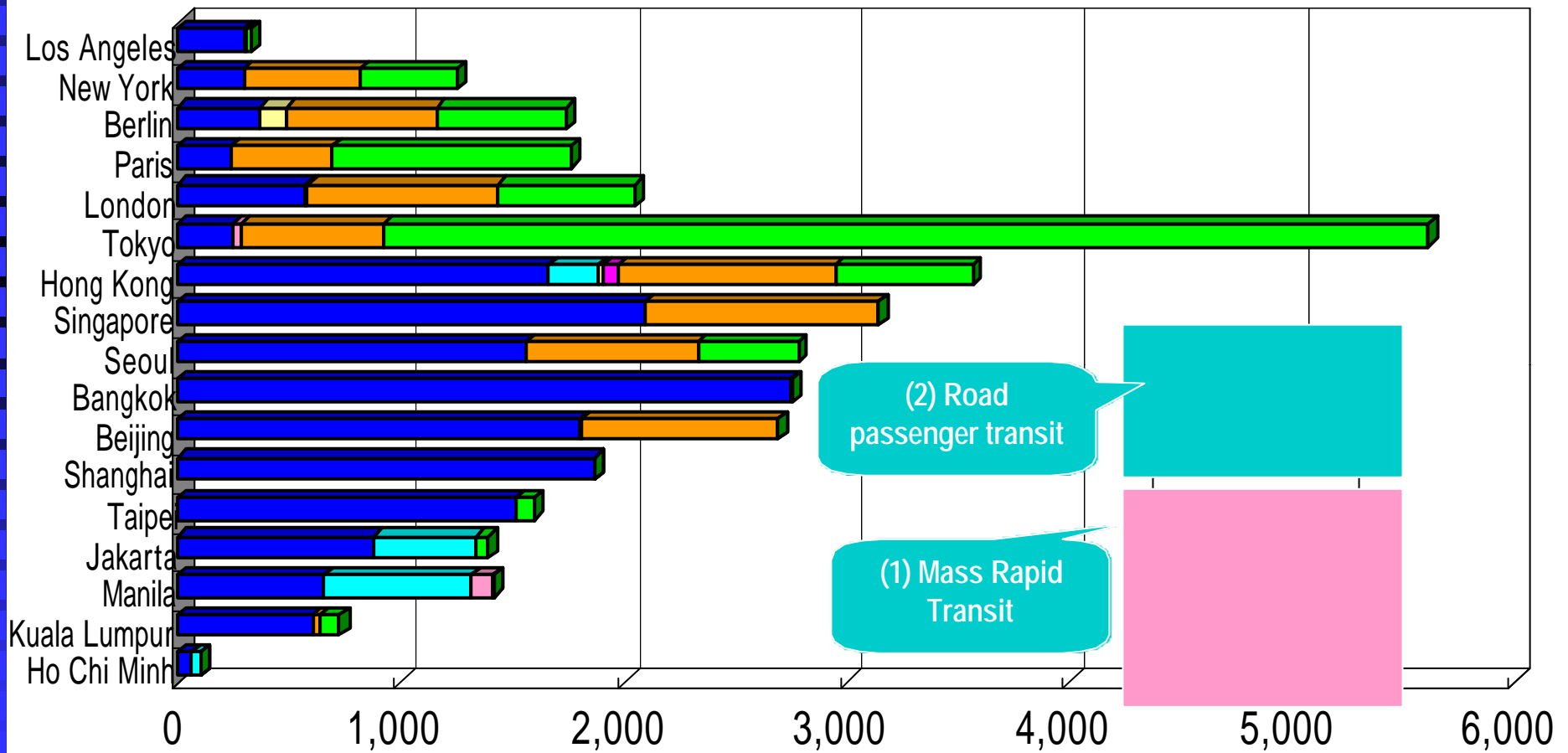
Central challenge: to identify strategic objectives sought by the city and means of implementation

Modes of Public Transport

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Overview

Public transport passenger kilometers per capita in selected cities



(Source: Hayashi, 2003)

p.km/person (1995)

Mass Rapid Transit



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Objectives and Role of MRT

Possible objectives include

- Permitting the continued development of city-center activity
- Maintaining the quality of access to city center
- Providing basic accessibility
- Reducing congestion and maintaining the central city

Choice of MRT Technology

	BRT	LRT	Metro	Suburban Rail
Initial Cost (million\$/km)	1-8	10-30	15 - 180 (atgrade) (Undergd.)	Varies
Operational Capacity (passengers/h/ direction/lane)	15,000 – 35,000	10,000- 20,000	Up to 60,000	Up to 30,000
Speed (km/h)	15-25	15-25	30-40	40+
Environmental Impact	Good system can improve env. quality	Less local air pollution and GHG	Underground regarded as most env. friendly	
Application	Strong political will and forward planning required	Interim steps to the creation of Metro	Most important issue: financial viability	can be converted to modern system

(Source: IEA, 2002)

Ownership and Financing

Covering MRT full-cost is not always possible

Financing MRTs

- Mobilization of private finance
- Concession of existing systems
- Cross-modal financial transfer
- Mobilizing the “development gain”

Financing BRTs

- Public private partnership difficult for provision of infrastructure

Public Transport Integration

- Necessary to maximize the operational capacity
 - ◆ Creation of interchange facilities
 - ◆ Bus service restructuring
- Barriers
 - ◆ Fragmentation of operational responsibility
 - ◆ Political and Social feasibility

Strong local coordination needed

Pricing

Objectives

- To generate revenue for operation
- To give incentives over automobile use
- To foster coordination among public transportation modes
- To provide access of the poor to employment

Public Road Passenger Transit



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Bus Systems

Crucial mode of public transport in Asia

- The share of bus has declined in many cities
 - ◆ Poor performance due to institutional reasons and overregulation
 - ◆ People's preference for private vehicles
- Making bus systems clean
 - ◆ Better maintenance, improved fuel, alternative-fuel

Paratransit

Notable feature of developing Asia

- Pros: may better respond to consumer demand; employment opportunity
- Cons: congestion, pollution, competition with basic public transport network

At what point does the growth of paratransit need to be controlled?

Factors for Successful Introduction of Public Transport



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Integration of Public Transport with Land-Use Planning

- Integration with land-use planning: to ensure to cover substantial percentage of the transportation needs (e.g. Curitiba).
- Failure to integrate creates sprawls (Tokyo, Bangkok, Manila)
Advisable to introduce land use planning to effectively control urban sprawl

Coupling Public Transport with Traffic Demand Management (TDM)

- MRT infrastructure projects have limited impact on car ownership and use
- Car ownership is generally more influenced by parking space availability and ownership costs

Public transport development best approached if combined with TDM

Items for Further Discussion/ Activities

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Common concerns to develop environmentally friendly public transport

- Selection of appropriate modes and mix
- Development of effective networks
- Improvement of paratransit and bus
- Development of sustainable funding plans
- Integration with land-use planning
- Integration with TDM

For further discussion/ activities

- Information sharing among the participating countries
- Clarifying the conditions for successful introduction of public transport
- Case studies by the regional expert group