

International Seminar on
Sustainable Urban Transport & Land Use Planning

**Policy and Strategy
for Sustainable Urban
Transport in Vietnam**

23-26 September 2005

Mr. Tran Minh Phuong, MOT, Vietnam

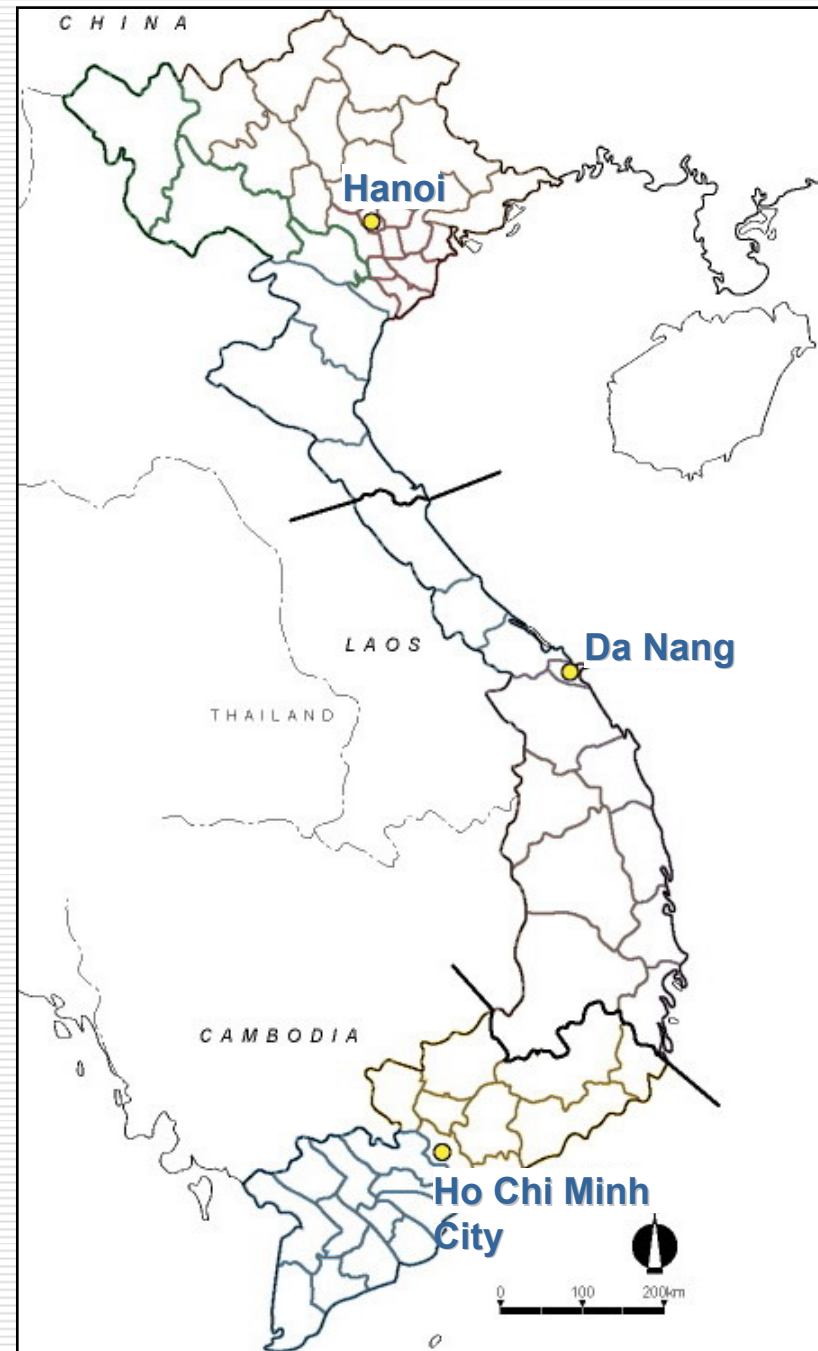
Dr. IWATA Shizuo, Managing Director, ALMEC Corporation

Topics

- Current Situation
- Main Issues
- Government Policy and Initiatives

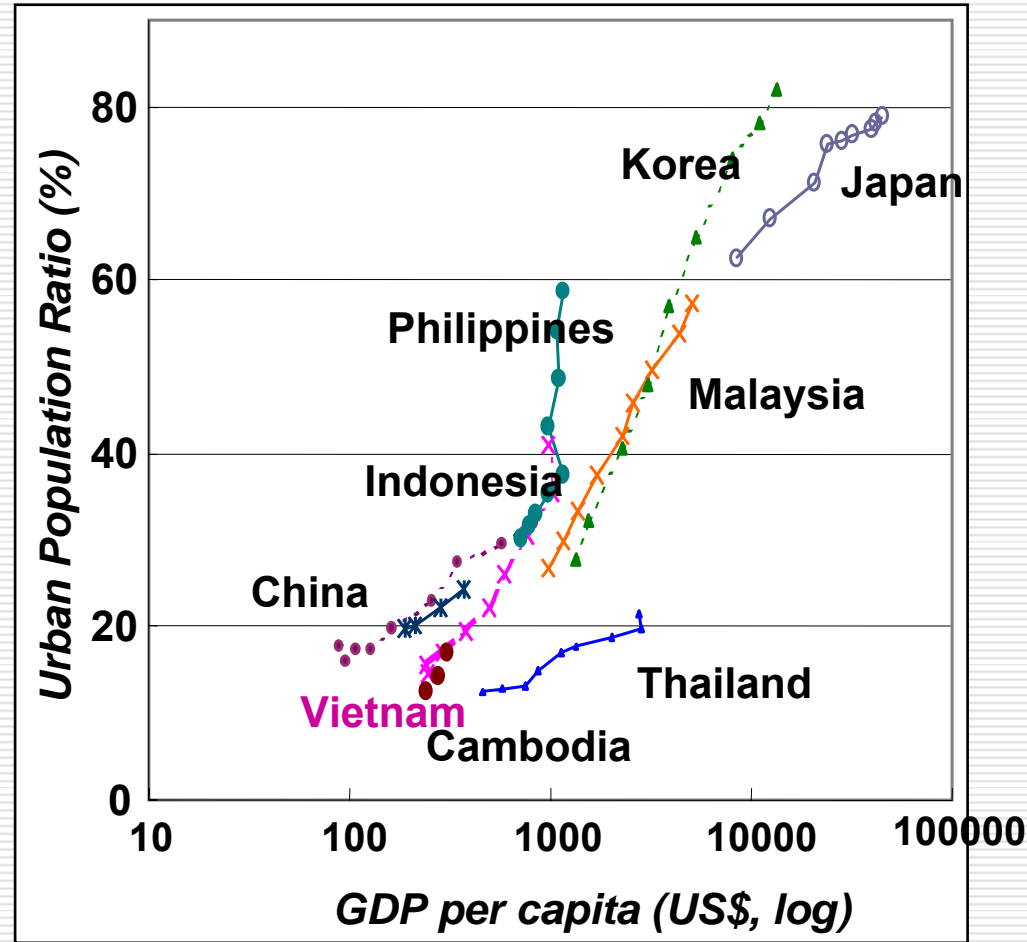
■ Profile of Vietnam

- Land: 329,000 km²
- Population(2003): 80 million
- Population Growth: 1.5 %/yr
- GDP: US\$ 38,825 (2003)
- Per Capita GDP: US\$ 480
- Economic Growth: 11.6 %/yr
- Poverty Rate (2001-2): 28.9 %
- Urbanization Rate: 25.8%
- No. of Cities: 25



■ Development of Vietnam

- Urbanization
 - Industrialization
 - Motorization
 - Globalization
- ➔ Growth of cities (no. and size)
- ➔ Economic growth with change in sector structure
- ➔ Changing in lifestyle and diversifying needs
- ➔ Increasing concern on environment
- ➔ Increasing difficulties in sector management



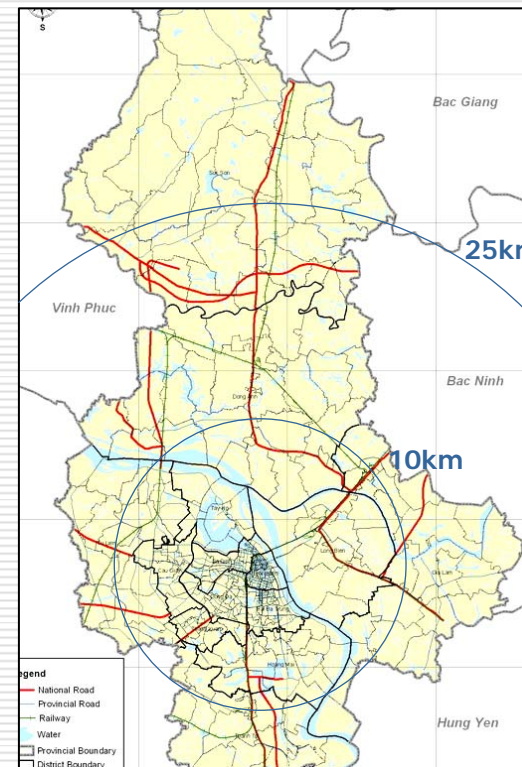
Hanoi and HCMC

| HANOI | 2000 | 2020 |
|---|-------------------|-------------|
| Population (000) | 2,756 | 4,800 |
| Population Density (persons/ha) | 30 | 52 |
| Population Growth(%/yr) | 3.4 | 2.8 |
| Per capita GRDP at current price (US\$) | 724 | 4,600-6,000 |
| Car Ownership (%) | 1.6 ¹⁾ | 19.8 |

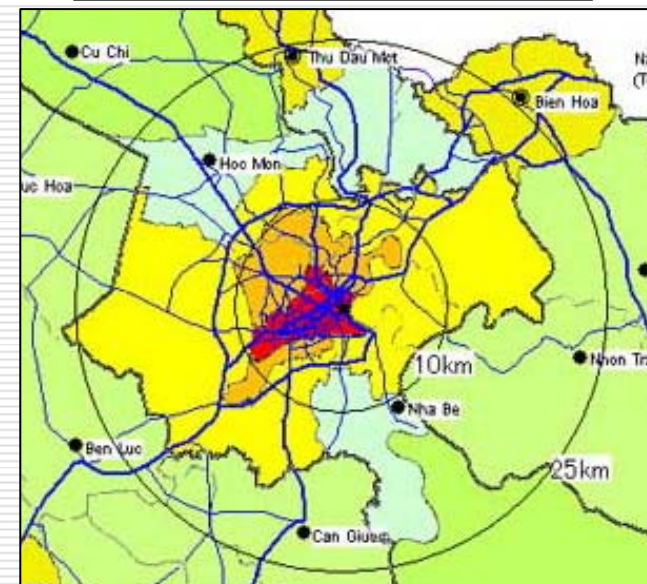
Source: GSO; HAIDEP Study Team. 1) 2005 figure

| HCMC | 2000 | 2020 |
|---|-------|--------|
| Population (000) | 5,175 | 10,000 |
| Population Density (persons/ha) | 25 | 48 |
| Population Growth(%/yr) | 2.2 | 3.5 |
| Per capita GRDP at current price (US\$) | 1,365 | 5,000 |
| Car Ownership (%) | 1.7 | 19.2 |

Source: GSO; HOUTRANS Study Team.



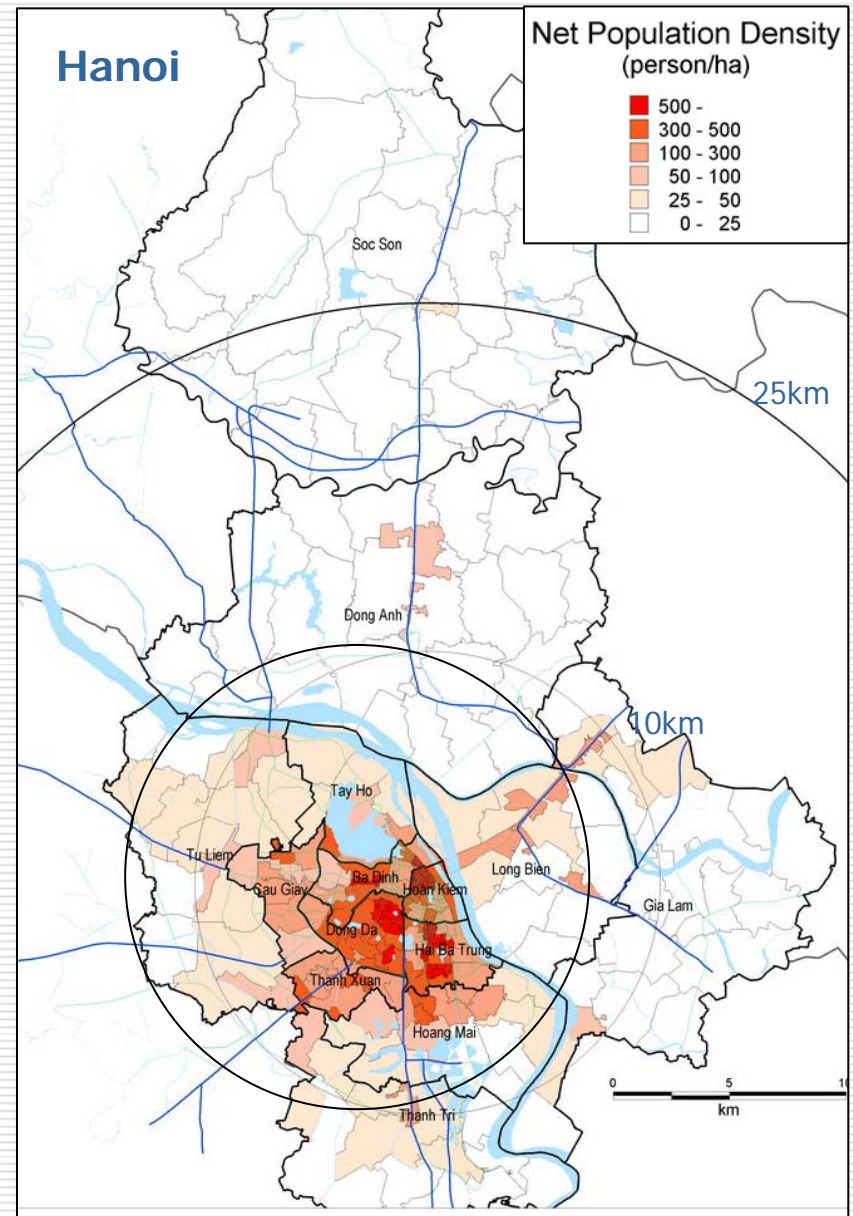
Hanoi
(921 km²)



HCMC
(2,095 km²)

■ Characteristics of Urban Areas

- Compact urban areas
 - ✓ high density in city centre (500-1,000 persons/ha)
 - ✓ highly mixed landuse
 - ✓ sprawling along major roads
- Limited urban centers
 - ✓ mono centre
 - ✓ absence of modern sub-centers (business/commercial)
 - ✓ lack of effective urban development methods
- Lack of roads and infrastructure
 - ✓ low density and poor network
 - ✓ lack of funding
 - ✓ slow progress (resettlement)

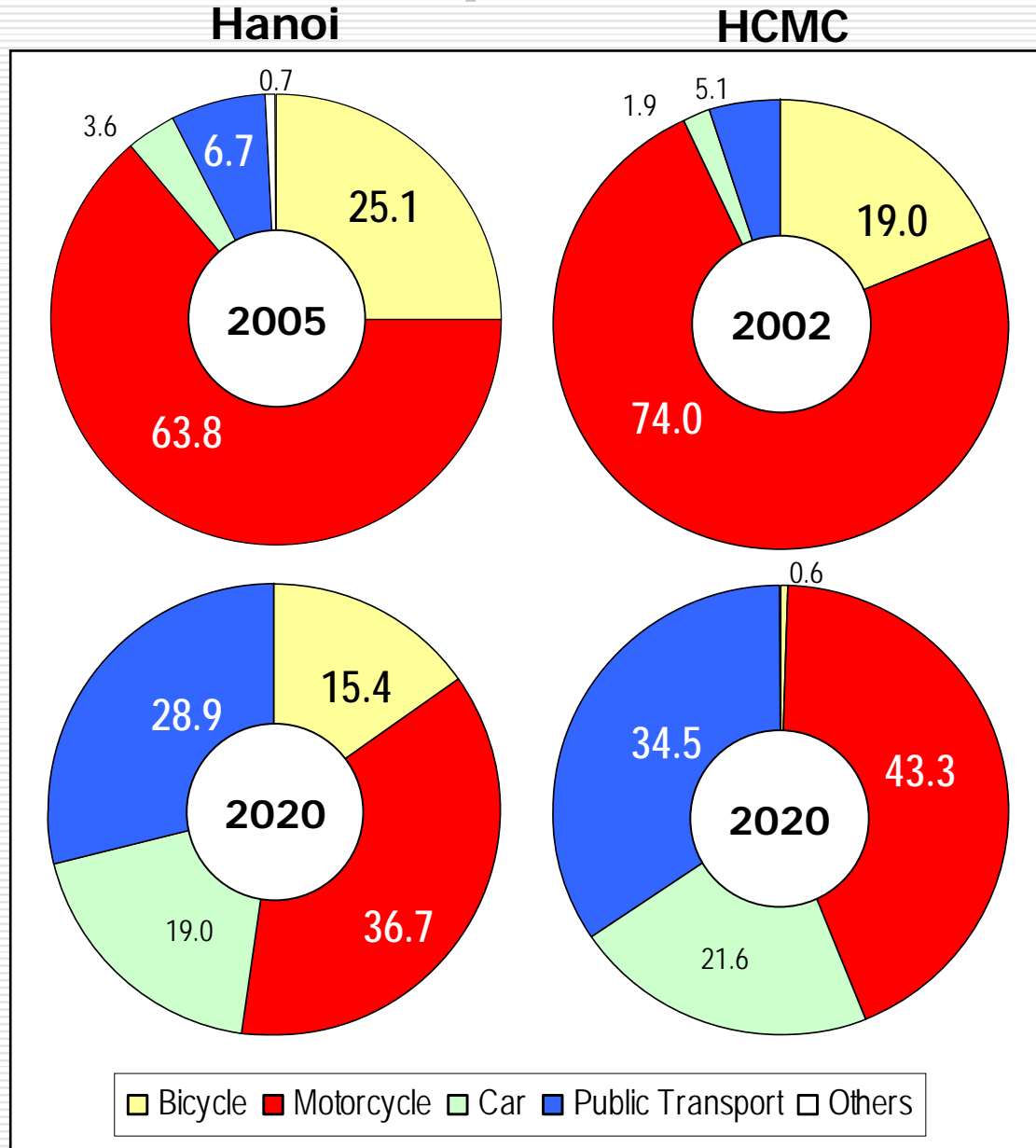


➡ Insufficient urban planning and development capacity

Characteristics of Urban Transportation

◀ Modal Choice ▶

- Heavy dependence on private transport (motorcycle, bicycle...)
- Quickly changing modal share
 - ✓ decrease in bicycle
 - ✓ sharp increase in motorcycle
 - ✓ increase in private car
- Steadily growing bus transport through vigorous efforts of government



Urban Transport Situation in Hanoi and HCMC

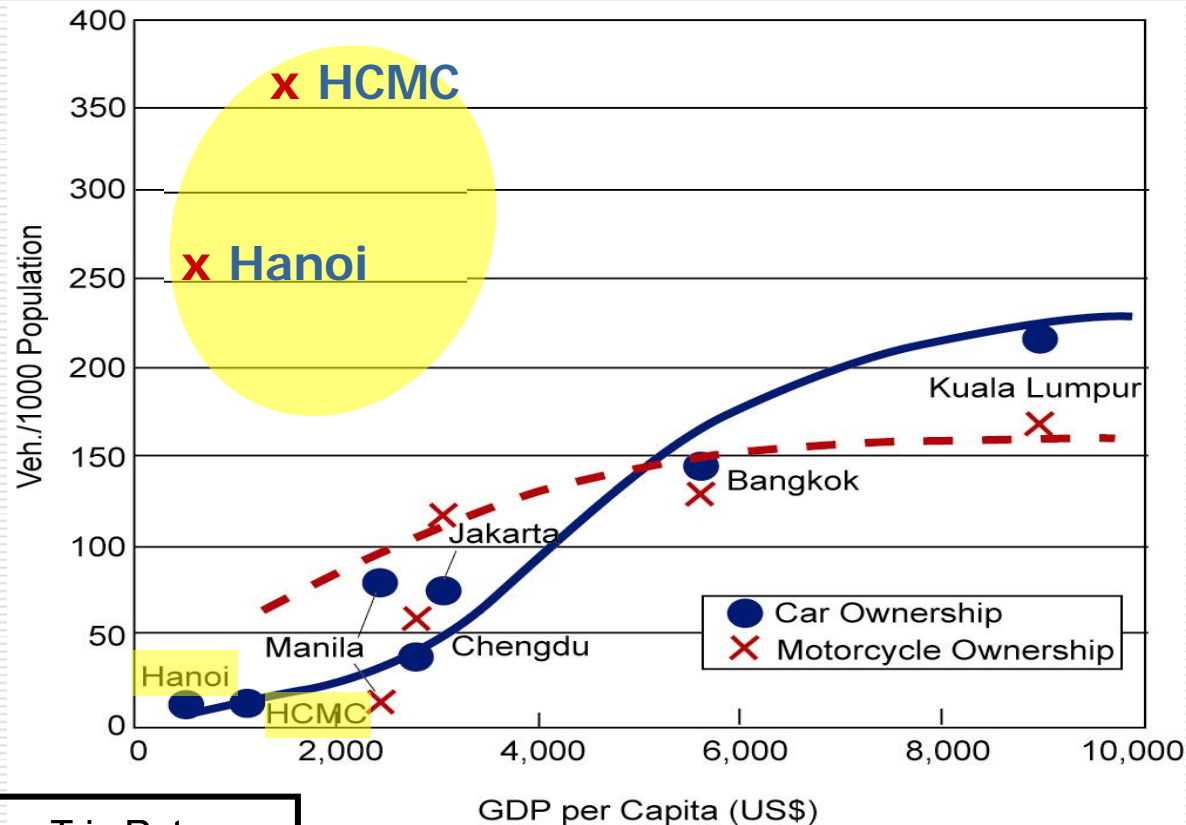


■ Assessment

- Mobility
- Accessibility
- Safety
- People's satisfaction

□ Mobility

- High ownership level of motorcycle



- High trip rate

| | Year | population (000) | Trip Rate | |
|--------------|------|------------------|--------------|-------------|
| | | | with walking | w/o walking |
| HCMC | 2002 | 7,693 | 3.0 | 2.5 |
| Hanoi | 1996 | 1,200 | 2.6 | 2.0 |
| Manila | 1996 | 13,565 | 2.2 | 1.8 |
| Jakarta | 2002 | 21,594 | 1.7 | 1.1 |
| Kuala Lumpur | 1998 | 2,000 | 2.5 | n.a |
| Bangkok | 1995 | n.a. | 2.3 | n.a |
| Chengdu | 2001 | 3,090 | 2.6 | 1.8 |
| Tokyo | 1998 | 34,000 | 2.3 | n.a |

□ Gap in Mobility

◀ Ownership of Own Motorcycle ▶

| Sex | Yes | No |
|--------|------|------|
| Male | 77.4 | 23.6 |
| Female | 46.6 | 53.4 |

◀ Use of Motorcycle by Income Class(%) ▶

| Household Income Class | Self-driving | Sent by M/C, M/C Taxi |
|------------------------|--------------|-----------------------|
| Low (19%) | 80.4 | 19.6 |
| Middle (61%) | 83.6 | 16.4 |
| High (20%) | 86.2 | 16.1 |

◀ Use of Motorcycle by Gender (%) ▶

| Sex | Self-driving | Pick-up/ Send-off |
|--------|--------------|-------------------|
| Male | 90.1 | 9.9 |
| Female | 21.8 | 78.2 |

◀ Use of Motorcycle by Students (%) ▶

| | Age (years) | | | |
|-------------------|-------------|-------|-------|-------|
| | 5-10 | 11-15 | 16-18 | Total |
| Pick-up /Send-off | 91 | 75 | 53 | 69 |
| by oneself | 9 | 24 | 47 | 31 |

□ Accessibility

Average Travel Time (minutes)

| Purpose | Ho Chi Minh City | | | Hanoi (average) |
|-----------|--------------------|----------------------|---------|--------------------|
| | within District | Between Districts | Average | |
| to Work | 14.0 | 28.4 | 17.3 | 19.8 |
| to School | 12.8 | 24.8 | 19.3 | 24.8 |
| Private | 12.6 | 25.6 | 15.3 | 17.5 |
| Business | 14.7 | 35.8 | 25.9 | 18.7 |
| to Home | 13.6 | 27.1 | 15.5 | 19.2 |
| Total | 13.3 | 27.2 | 18.0 | 19.4 |

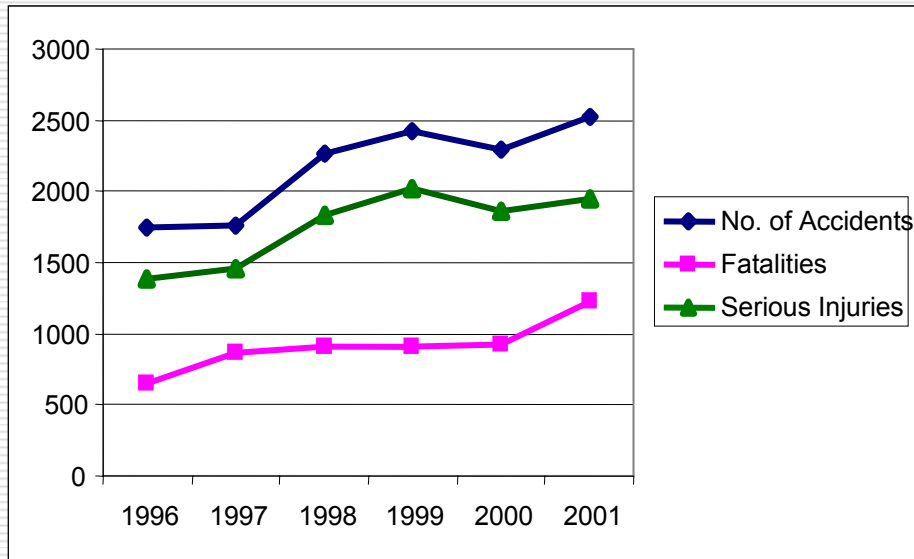


Reasons for relatively good

- compact city
- mixed landuse
- use of motorcycle, bicycle and walking

□ Safety

● Traffic Accidents



| Year | No. of Accidents | No. of Fatalities |
|------|------------------|-------------------|
| 1996 | 1,749 | 653 |
| 1997 | 1,765 | 871 |
| 1998 | 2,259 | 910 |
| 1999 | 2,418 | 912 |
| 2000 | 2,299 | 929 |
| 2001 | 2,519 | 1,224 |

● Comparison of Accident Ratio in Asian countries

| Country | Accidents Ratio (Fatalities/ million Vehicles) |
|----------------|---|
| Malaysia | 597 |
| Philippines | 274 |
| Singapore | 290 |
| Thailand | 610 |
| Vietnam | 1,102 |

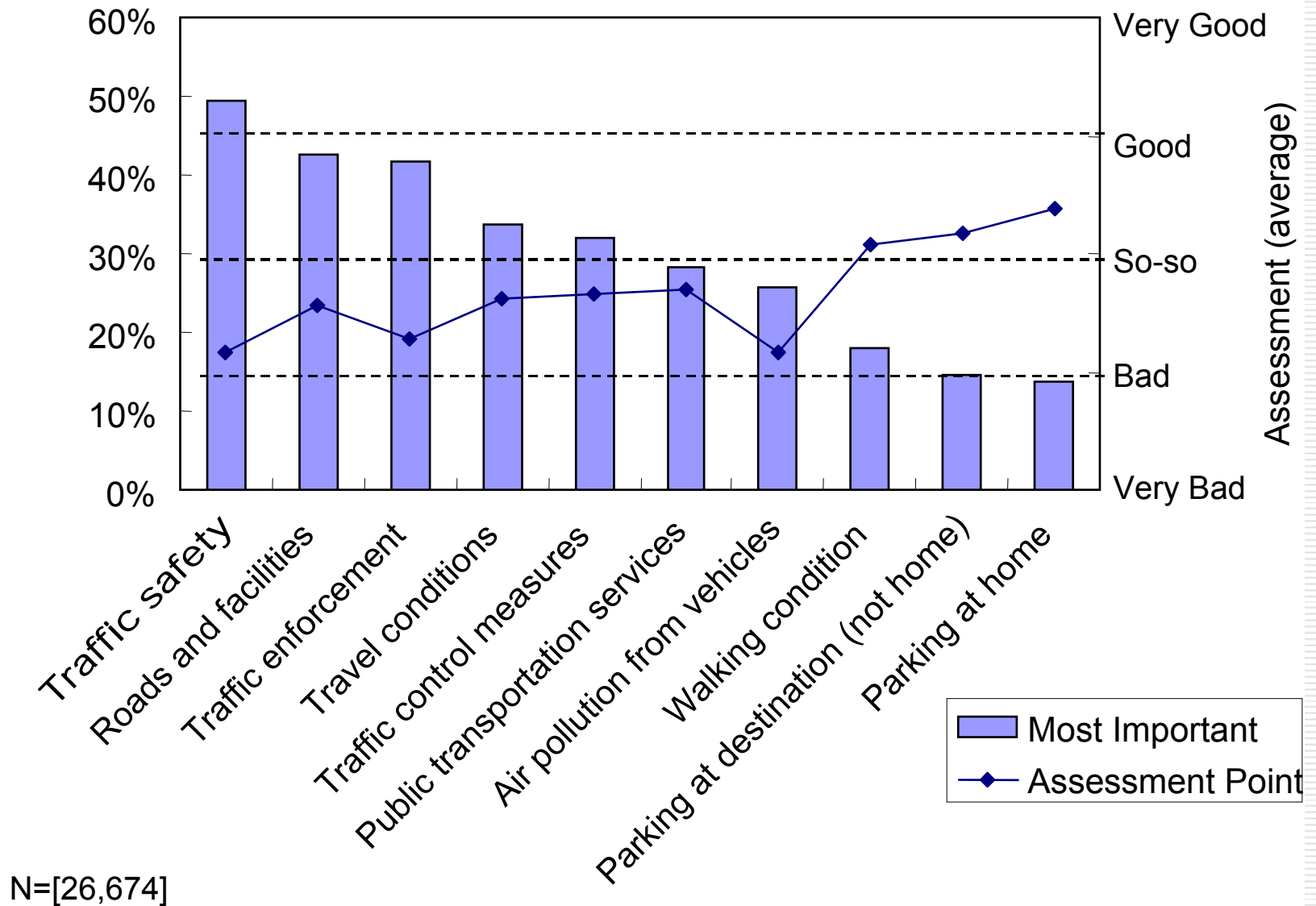
➔ *Very high rate of casualties
(mostly human error)*

□ Peoples' Assessment on Existing Transport Services

| Category | | Assessment (%) | | |
|------------------------------|---------------------|----------------|-------|-------------|
| | | V.bad-Bad | So-so | Good-V.good |
| Trip Purpose | ● To work | 3.3 | 59.5 | 37.1 |
| | ● Private | 1.5 | 51.6 | 46.9 |
| | ● Business | 3.5 | 63.0 | 33.0 |
| | ● To Home | 3.6 | 57.0 | 39.4 |
| Transport Mode | ● Car | 4.1 | 52.6 | 43.3 |
| | ● Motorbike | 3.9 | 60.2 | 35.9 |
| | ● Bicycle | 2.6 | 63.1 | 34.4 |
| | ● Public Transport | 5.6 | 67.4 | 27.0 |
| Household Income (mil.D/mo.) | ● Low (<1.5) 19% | 2.4 | 56.6 | 41.1 |
| | ● Mid (1.5-4.0) 61% | 2.9 | 57.4 | 39.7 |
| | ● High (4.0<) 20% | 4.3 | 56.8 | 38.9 |

Source: HOUTRANS HIS (JICA)

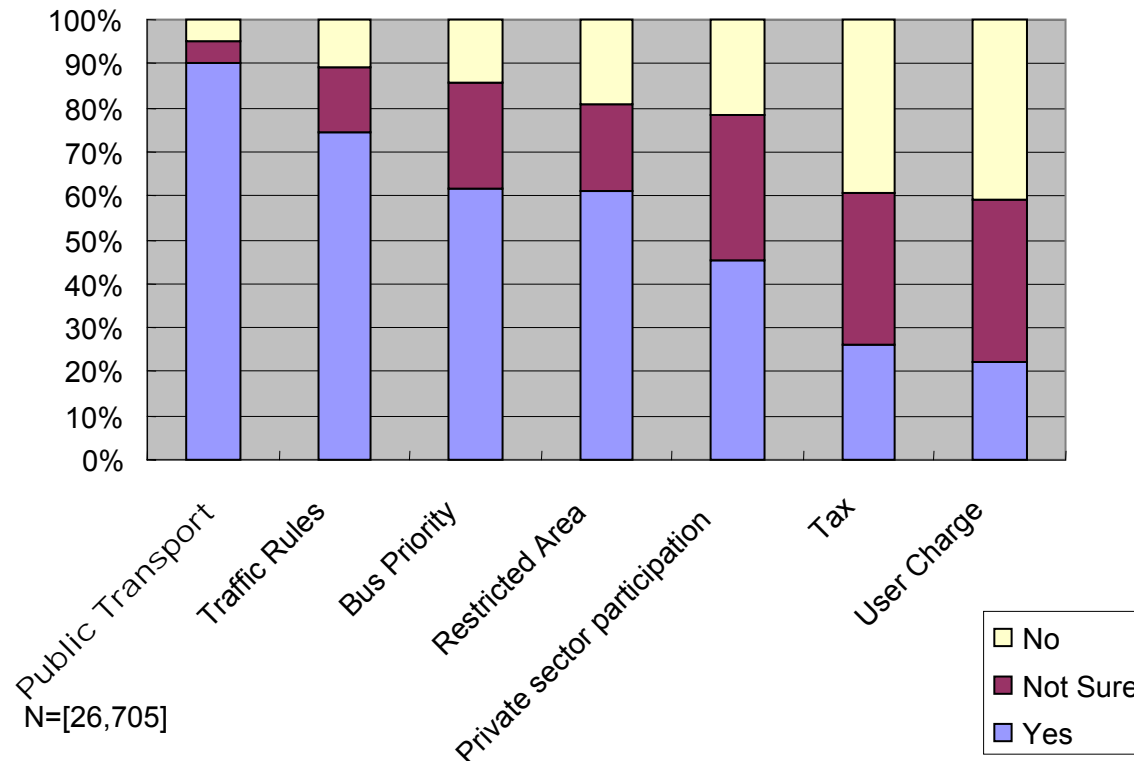
Peoples' Concerns on Transport Services



□ People's Expectation for the Future

- Residents responded that HCMC should direct toward public transport oriented city with controlled motorcycle ownership and usage

Support for Transport Policies (%)



■ Main Issues

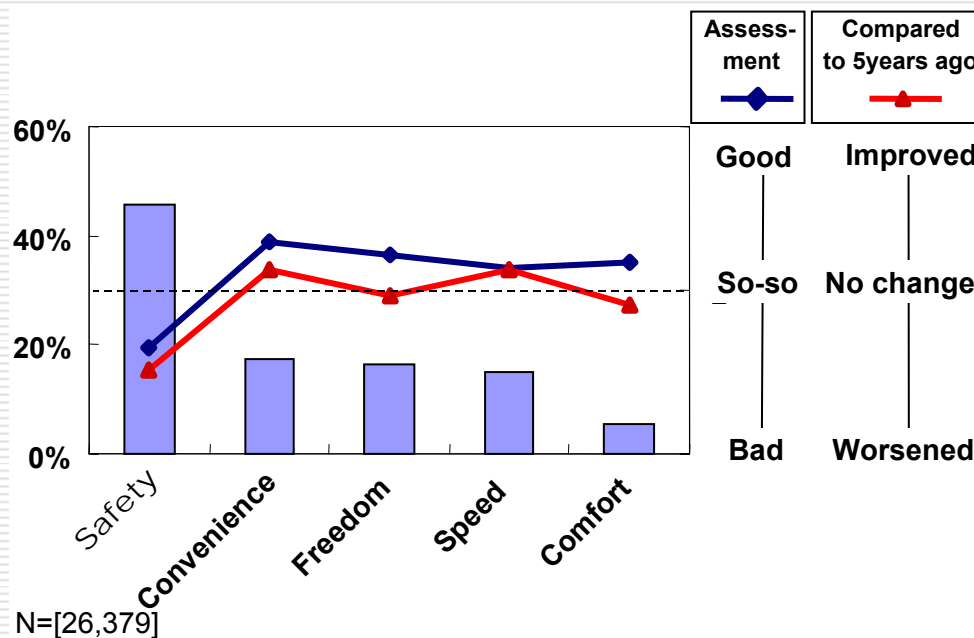
- Traffic congestions
- Bus services
- Motorcycle issue
- Traffic management
- Funding
- Planning

□ Traffic Congestion

- In general, there is no serious traffic congestions
- Peoples' concern is safety and good public transport
- People feel traffic situation has been worsening quickly
- Traffic congestion will be very serious when number of cars increase.
- Controlling motorcycle use will not contribute to mitigating traffic congestion.
- Buses will not be a solution unless they are operated efficiently.

Motorcycle *Issue*

- ✓ Motorcycle is very convenient, fitting to current urban structure to provide door-to-door service
- ✓ Safety is coming serious concern
- ✓ Contribution to traffic congestion is not much. Instead current use of motorcycle is rather efficient.



◀ Efficiency of Motorcycle ▶

| | M/C | Car | Bus |
|-----------------------|--------------|------------|---------------|
| PCU | 0.15-0.2 | 1.0 | 2.5 |
| Ave. No. of Pax | 2.0 | 1.5 | 20 (30) |
| No. of Pax/PCU | 10-13 | 1.5 | 8 (12) |

□ Bus Services in Different Ways

- ✓ Success in Hanoi
- ✓ Services are more critical than fare
- ✓ Diversion from motorcycle is possible especially for longer distance trip.
- ✓ Initial success may not ensure future success without farther improvement

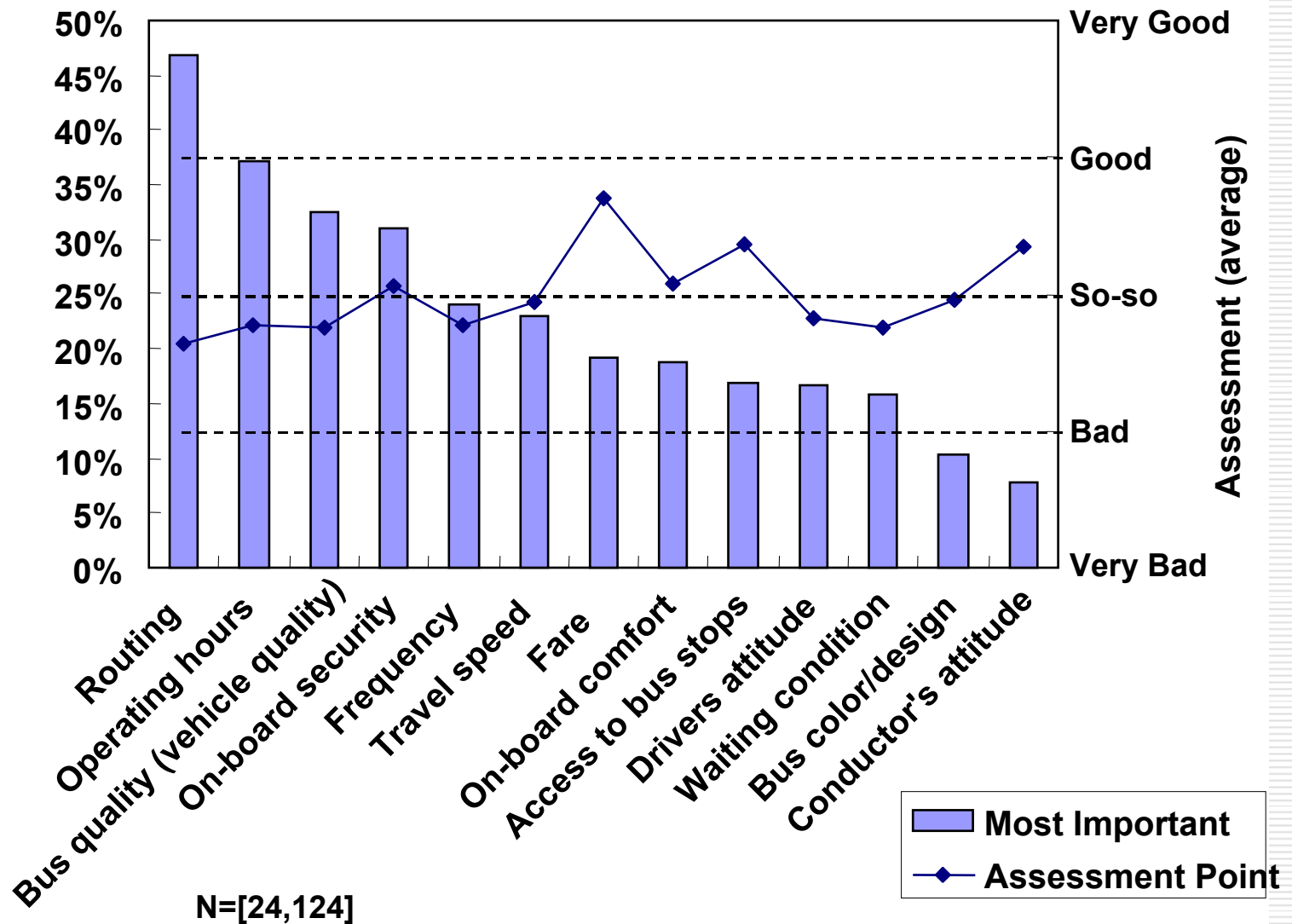
| City | Operator | Fare | Bus |
|-------|---------------|-------------------------------|-----------------------|
| Hanoi | Single Public | VND 2,500 – 3,000 (flat) | Mostly new |
| HCMC | Private | VND 1,000 (flat) with subsidy | Existing old, few new |

| City | | 1995 | 2005 | Growth (%/yr) |
|-------|---------------|-------------------------|-------------------------|---------------|
| Hanoi | '000 trip/day | 19 | 420 (6.8) | 36.3 |
| HCMC | (% to total) | 165 ¹⁾ (2.0) | 282 ²⁾ (2.1) | 9.3 |

1) 1996 figure

2) 2002 figure

□ Assessment of Bus Services



□ Traffic Management

- ✓ Lack of basic traffic management system (facilities, enforcement capacity, people's mind)
- ✓ Cities must be prepared for changing mix of the traffic (more cars and heavy vehicles)



□ Funding

◀ Total Investment ▶

Requirement of M/P (HCMC)

US\$ 11.1 billion

| | | M. USD |
|-----------------------------|-----------|------------------|
| Maintenance/ Minor Works | | 900 (assumed) |
| Other M/P Components | | 1,688 |
| UMRT | | 1,168 |
| Urban Expressway | | 1,777 |
| At-grade Roads | Primary | 2,501 |
| | Secondary | 3,104 |

◀ Potential source ▶

US\$8.5 ~ 14.2 billion

| Scheme | | USD bil. |
|---|---|--------------------|
| Congestion Charging in CBD | \$ 1.0 for car and \$ 0.1 for M/C per entry | (0.3 in 2002) |
| Increase in Vehicle Inspection Fee | Car: \$ 100/yr M/C: \$ 10/yr | 1.4 0.7 |
| Increase in Vehicle Registration Fee | Car: \$ 1,000-2,000 M/C: \$ 100-200 | 2.4~5.0 0.3~0.6 |
| PPP | 1/3 of expressway/UMRT | 1.3 |
| | 1/5 of secondary roads | 0.6 |
| Existing Mechanism | 2.5% of City's GDP | 4.6 |
| | 1% of City's GDP | 1.8 |

 Need for establishing stable fund source

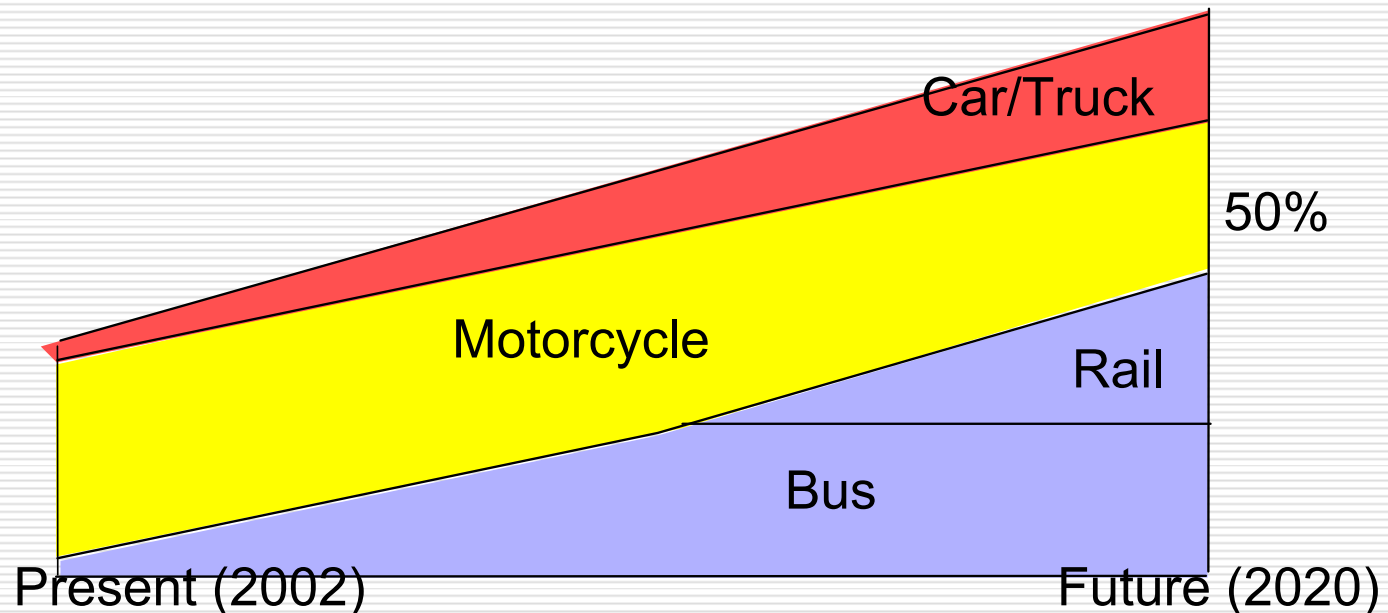
□ Planning

- ✓ Planning is undertaken mainly by a number of institutes under Ministry of Transport and partly by Universities
- ✓ Planning is biased to infrastructure projects. Comprehensive evaluation and prioritization process is weak.
- ✓ Basic planning data and analytical tools are available through technical assistance of various donors such as JICA, World Bank and others.

■ Government Policy Directions

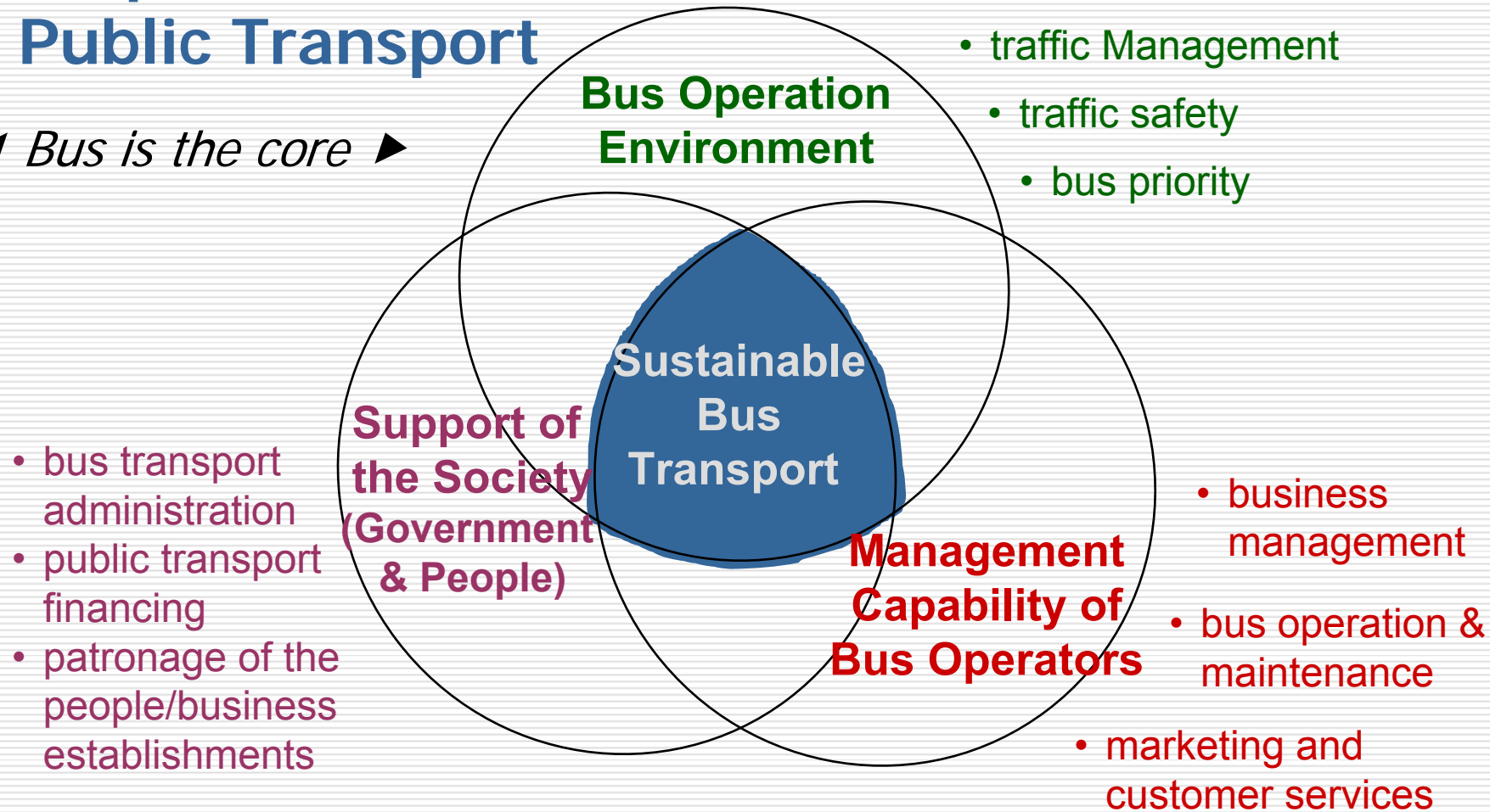
“Ensure mobility and accessibility to needed urban services for its people and society that is characterized by safety, amenity and equity and sustained by an efficient public transport system”

1. Infrastructure Development (roads, bridges, rail)
2. Public Transport Development
3. Traffic Safety
4. Traffic Control and Management
5. Capacity Building
6. Promoting social understanding on urban transport



□ Requirements to Achieve Sustainable Public Transport

◀ *Bus is the core* ▶



◀ *Urban rail takes over heavy public transport corridors but it is limited* ▶

END

....thank you for your attention