

**World Urban Transport
Leaders Summit 2010**

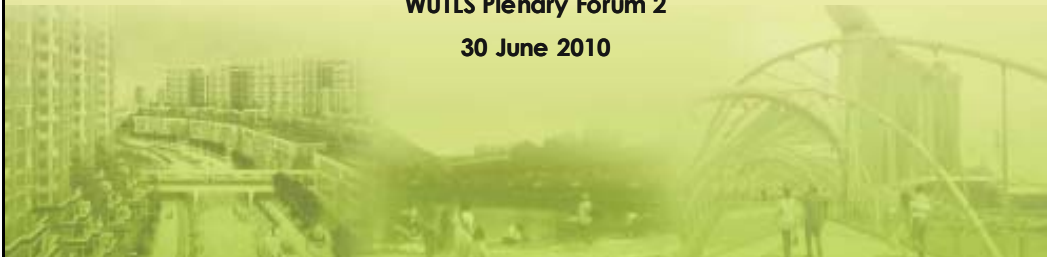
Prof Guo Jifu

Director, Beijing Transportation Research Center, China

Transforming Beijing into "Transit Metropolis"

WUTLS Plenary Forum 2

30 June 2010



Transforming Beijing into "Transit Metropolis"

**Prepared by: Prof. Liu Xiaoming,
Director of BMCT**

Presented by: Guo Jifu, BTRC

**World Urban Transport
Leaders Summit 2010**

Transforming Urban Transport for Liveable and Sustainable Cities

30 June - 1 July 2010 | Singapore

Outline

1. Introduction
2. Challenges
3. Strategies

1. Introduction

Beijing, China



Beijing 2008

- Total vehicles: 3.5 mln (4.3 mln to date)
- Private cars: 2 mln (2000 added daily)
- Urban roads: 4,460 km
- Urban Expressway: 236 km
- Highway: 20,754 km
- Expressway: 628 km
- Urban Subway: 200 km (228km, 9 routes)
- Public Transport: 650 routes
with 21,000 buses

Great success!

- Truly exceptional Olympic games
- The greatest Paralympic Games ever



Olympic Family

Conferee	Sydney games	Athens Games	Beijing Games
IOC	620	691	700
NOC	370	483	500
OFs	3,630	3,688	4570
Athlete and Officials	17,600	16,500	18,300
Technical Officials	2,500	2,500	2,750
Sponsors	55,000	35,000	363,00
Credited Media	21,000	21,600	24,430
Workers	106,500	124,890	81,460
Volunteer	41,000	44,654	100,000

Olympic Transport Operation

Spectators go in and leave the venues



Great success!

- Release time:
- Spectator
 - 150 → 90 → 75 min
- Athletes :
 - 50min
- OF:
 - 27 min



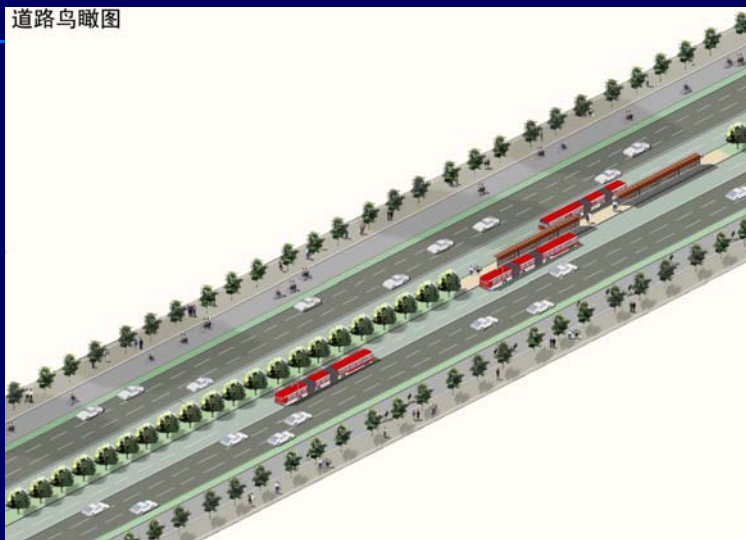
Key Factors to Success

- Using Public Transport
- Travel Demand Management
- ITS

Public Transport Preparing-BRT



BRT : Exclusive Bus Lane



New Buses : 18 m



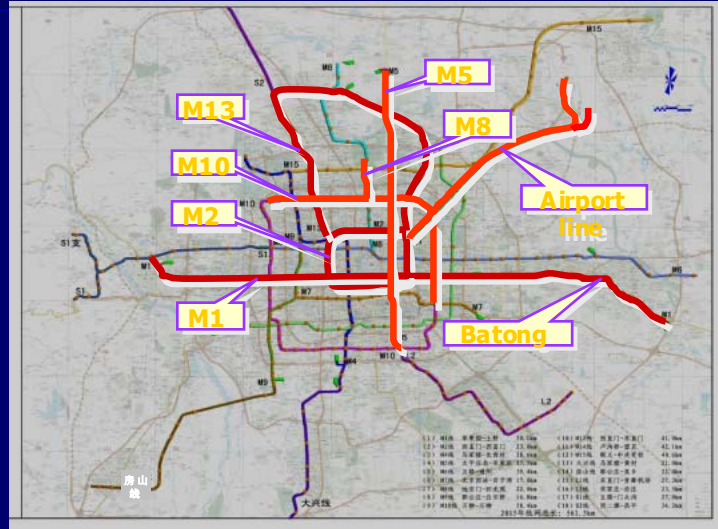
First Day Open



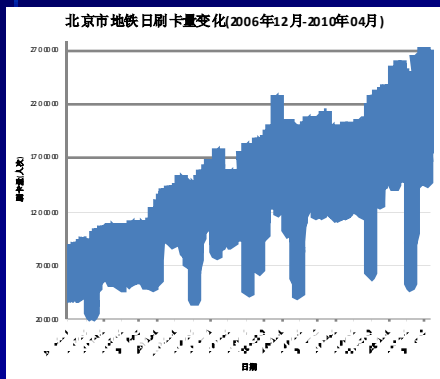
Dec 30, 2005 : 120,000 Boardings

Metro System

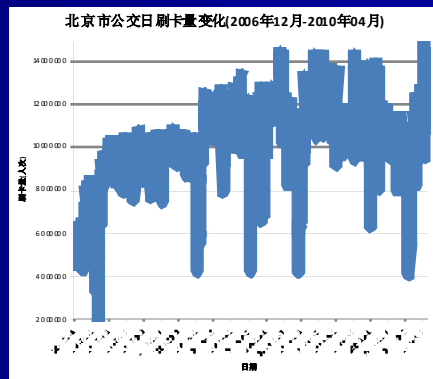
- 4 lines, 142km existed
- 4 lines, 58km, put into operation before the Games
- Total: 200km



Transit Passenger Growth

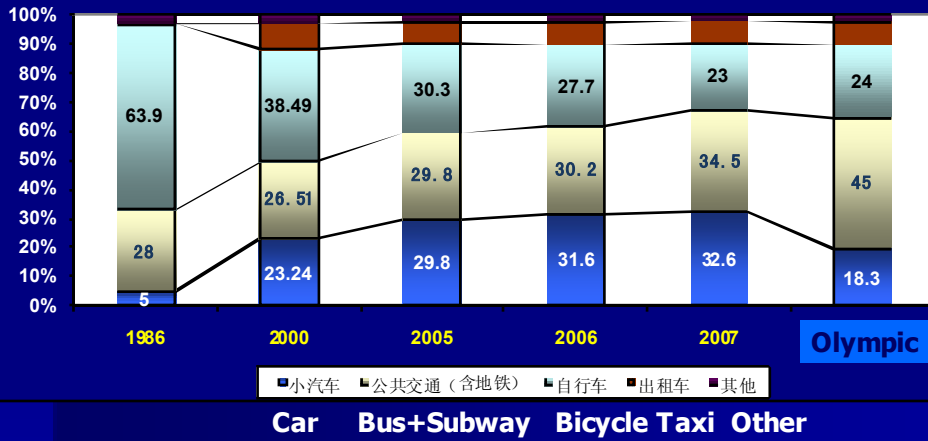


Metro (2007-2010)



Bus (2007-2010)

Modal Split



Travel Demand Management

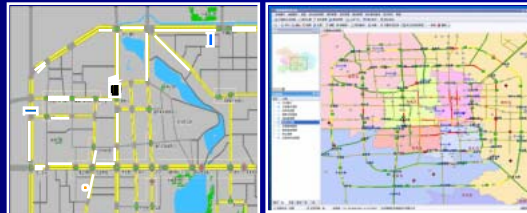
Through odd and even License plate number policy
During Olympic road traffic reduced by 23%



Traffic volume before and in Game time on west 3rd. Ring road in morning peak hour

ITS system

- Olympic Commanding Center
- Traffic signal control system, EMS, information service system, etc.

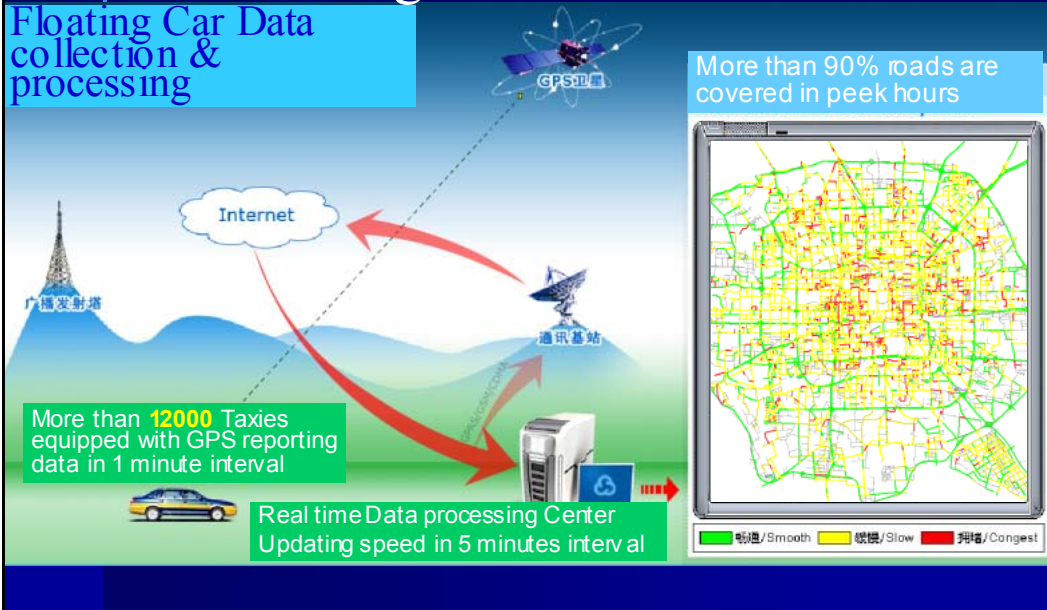


Low fare policy & Smart Card



15 mln Sold, 13 mln transactions per day
Bus, Subway, Toll, Parking, etc

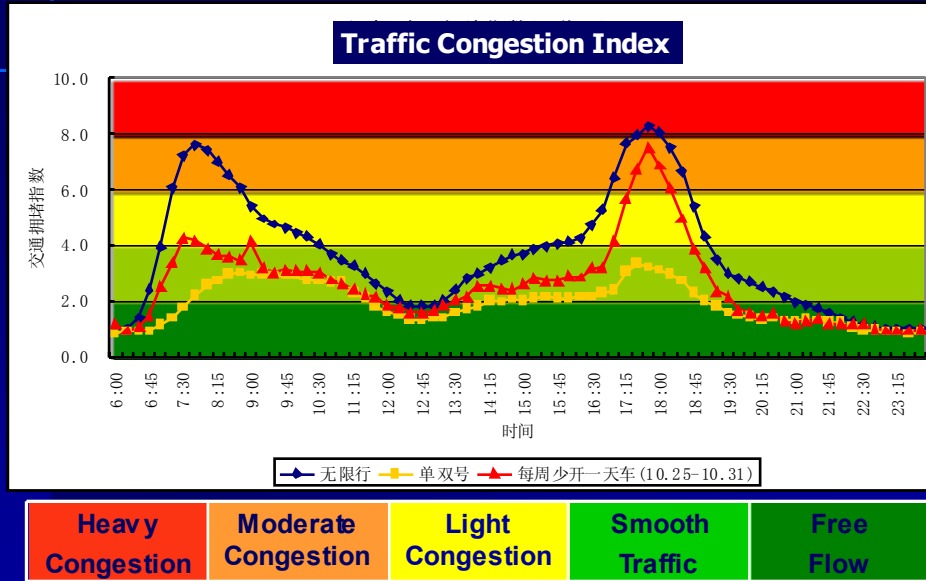
Floating Car Data System Monitoring The Traffic



5 dimension Traffic Congestion Index

- Extent
- Duration
- Coverage
- Frequency
- Reliability

Drive One Day Less

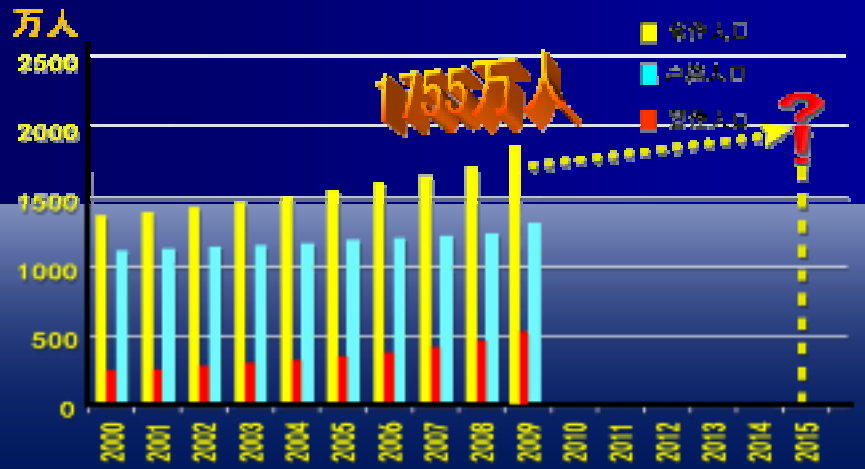


Heavy Congestion	Moderate Congestion	Light Congestion	Smooth Traffic	Free Flow
-----------------------------	--------------------------------	-----------------------------	---------------------------	----------------------

2. Challenges

- Population
- Urbanization
- Motorization

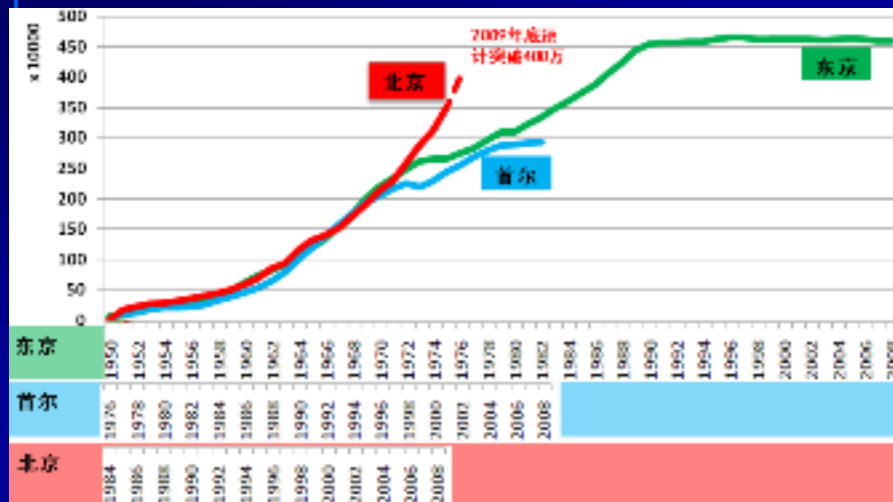
Challenge



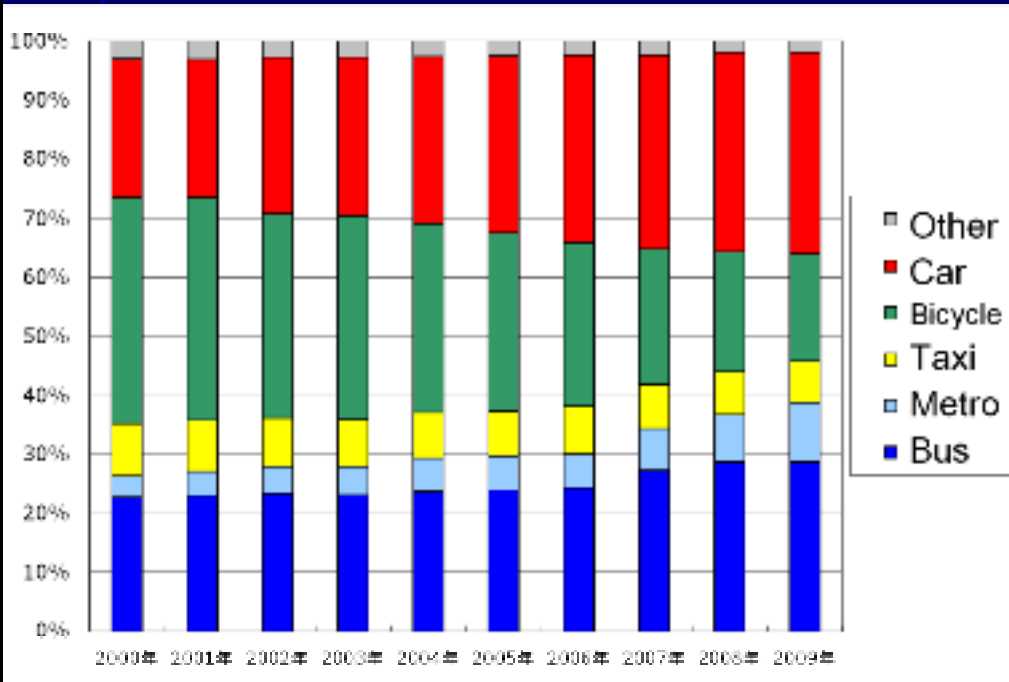
25

Population Growth Trend

Vehicle Growth



Modal Split Change

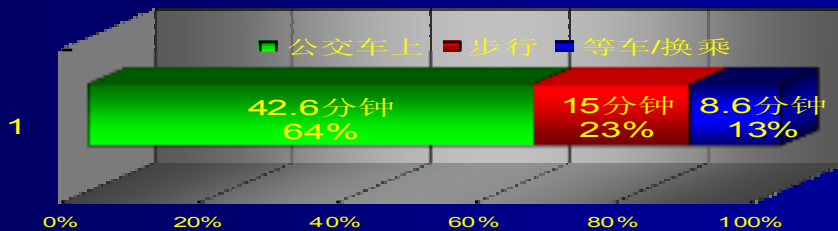


Transit Efficiency

Average commuter trip time 66 min

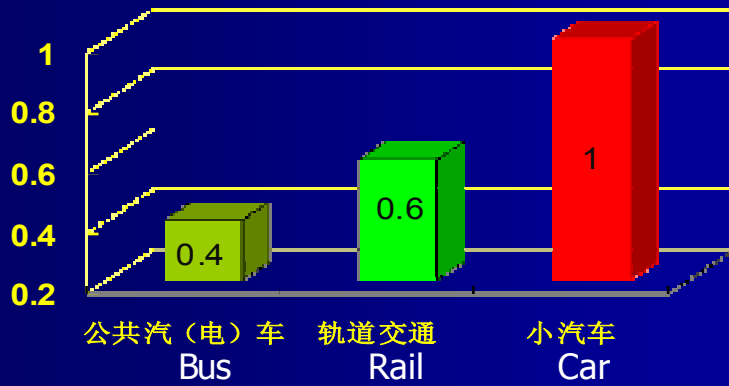
Where:

64% by vehicle, 23% by walk, 13% wait and interchange



Journey Speed: Bus vs Car

北京市不同交通方式出行速度对比

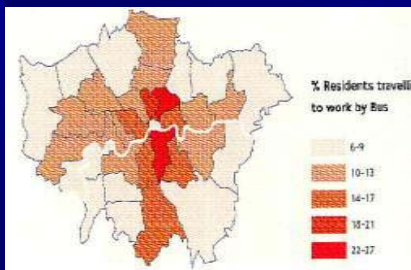


Car Usage

Modal Split (Tokyo)

	Year	1968	1978	1988	1993	1998
Central	Transit	64%	56%	56%	59%	58%
	Car	28%	29%	24%	21%	18%
Suburban	Transit	48%	36%	32%	33%	32%
	Car	31%	30%	39%	41%	42%

London (2004)

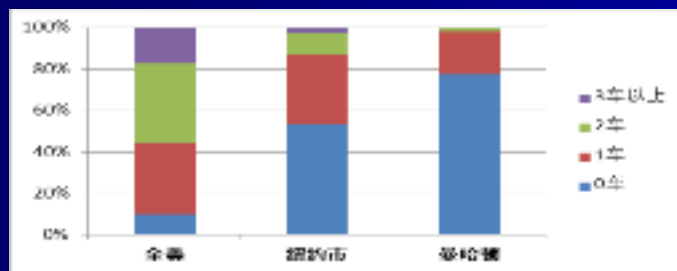


Car Usage

City	Parking fee (Rmb/H)
NY	70
Tokyo	40
Hong Kong	8-40
Beijing	2-5
Shanghai	10-20

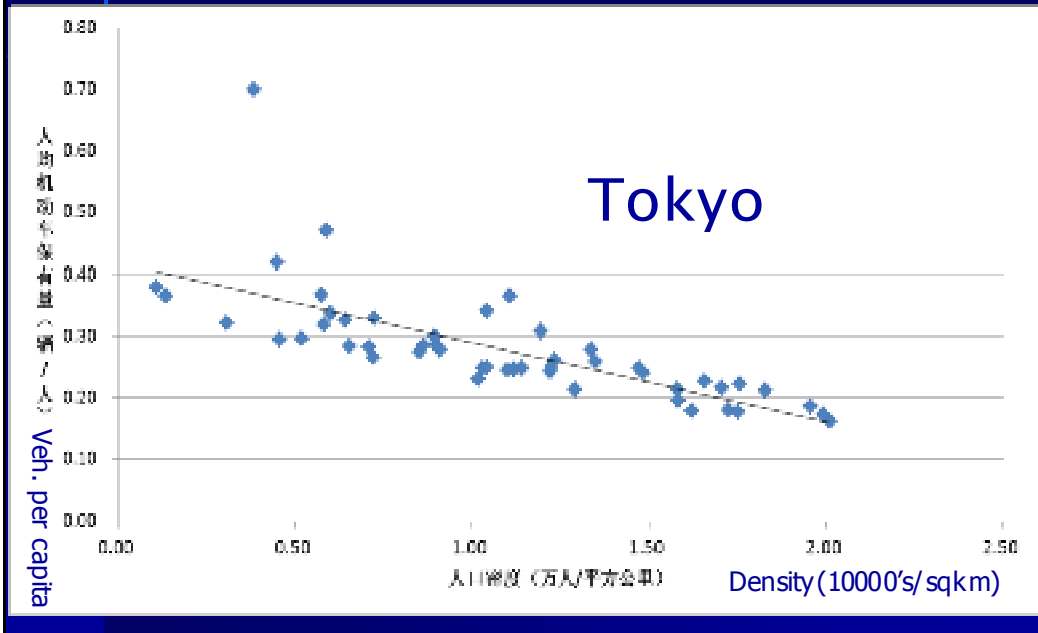
	Tokyo	LA	HK	London	Beijing
Daily Mileage(km)	14	43	39	30	45

Urban Density and Transport

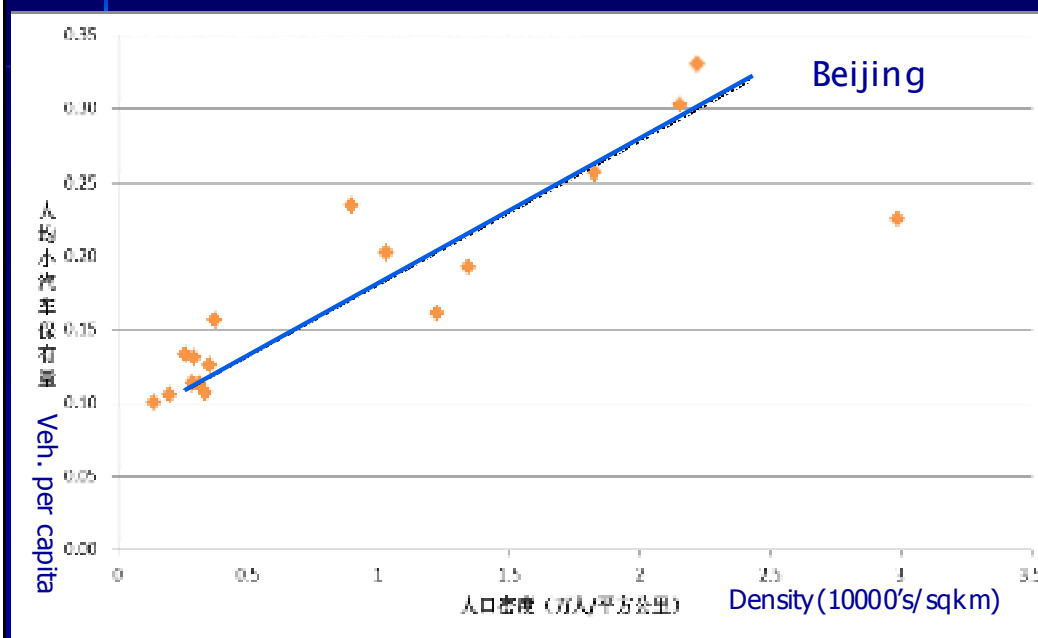


Cars by Household	US	NY	Manhattan
0	9.7%	53.6%	77.25%
1	32.3%	33.1%	20.75%
2	36.5%	10.5%	1.76%
3 and above	16.3%	2.8%	0.24%
Avg(cars/HH)	1.69	0.63	0.25

Urban Density and Transport



Urban Density and Transport

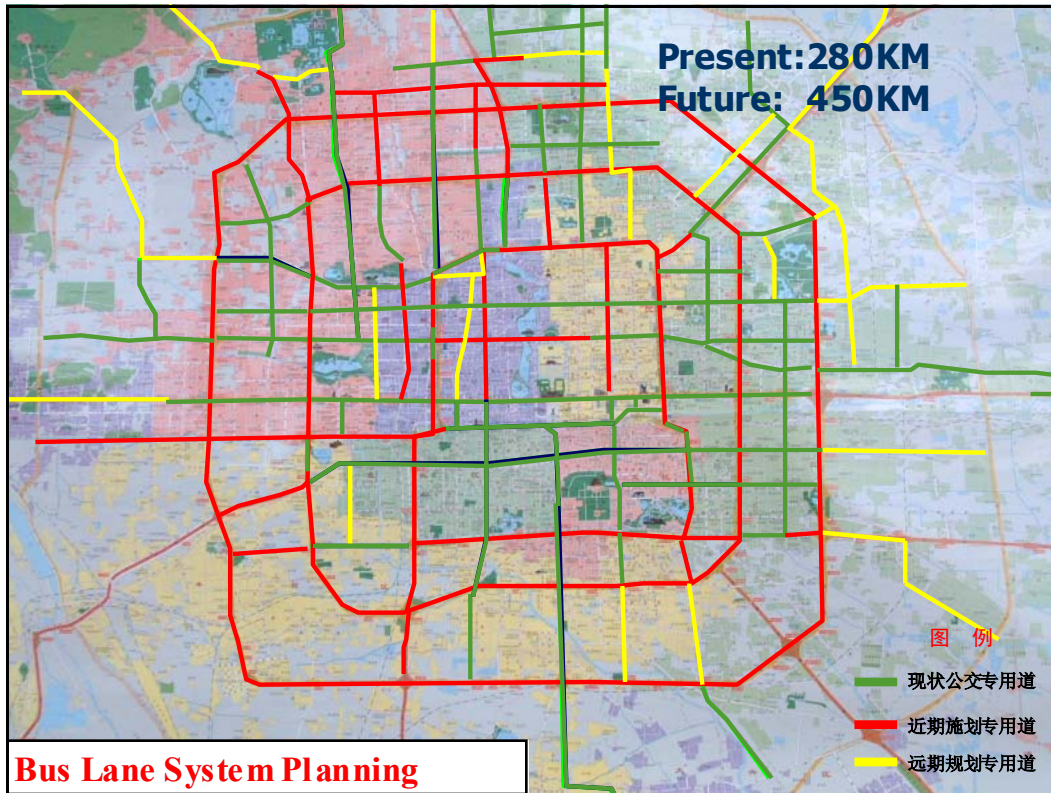


Urban Density and Transport

Central	Beijing Inner 4 Distr	NY Manhattan	Tokyo 4 Distr
Area (sqkm)	92	59	58
Pop (1000's)	2111	1635	1087
Vehicles (1000's)	653	251	187
Density (1000's/sqkm)	22.9	36.5	18.8
Veh/pop (veh percapita)	0.31	0.15	0.17

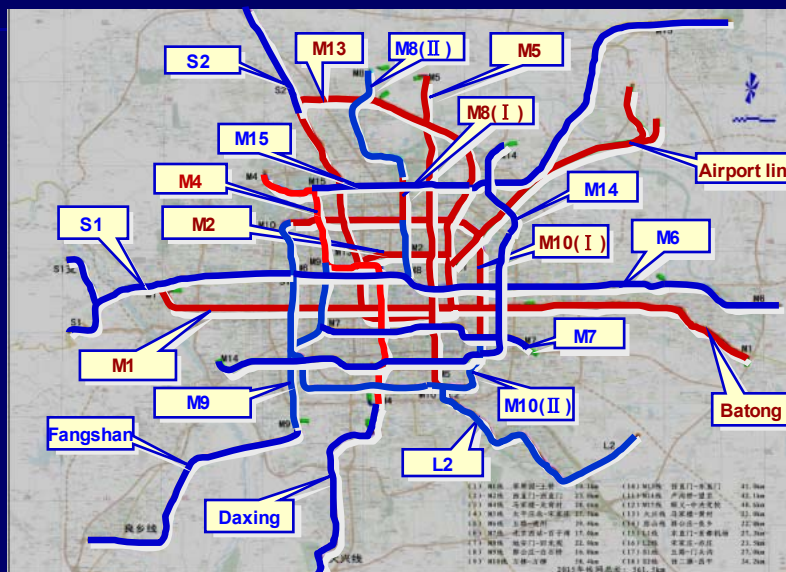
3. Strategies

- To develop a Transit Metropolis
 - People centered
 - Green Travel
 - Hi-Tech



Metro System Development

- In operation: 9 lines, 228km
- 5 more lines this year end
- 13 lines under construction
- by year 2015, 561km



Encourage green travels



Rebuild the walk and bicycle lane



Encourage green travels

P&R



Tiantongyuanbei station of M5



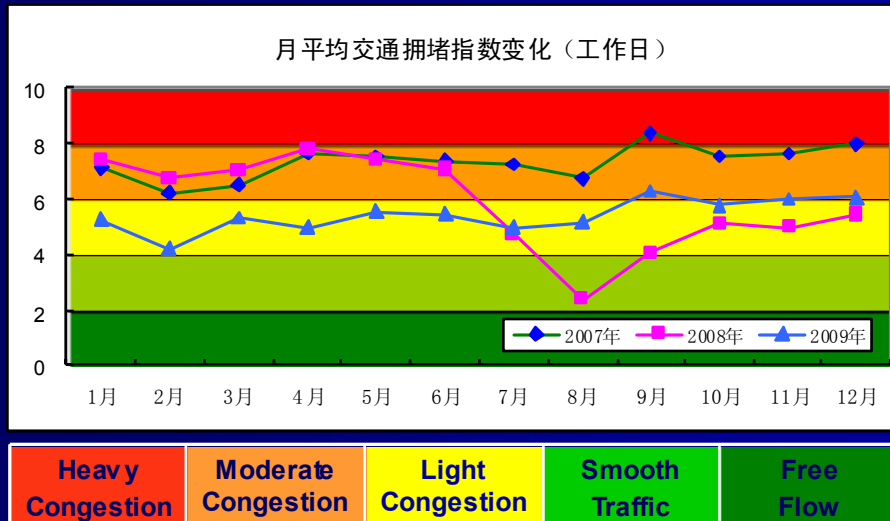
Tiantongyuanbei station of M5

B&R



Jiandemen station of M10

Traffic Congestion Index



Summary

- Transport for the people
- Green Transport
- Make Public Transport the first choice
- Travel Demand Management is Extremely important

Thank you!