Support with the Formulation of
a Comprehensive Plan for Public Transport

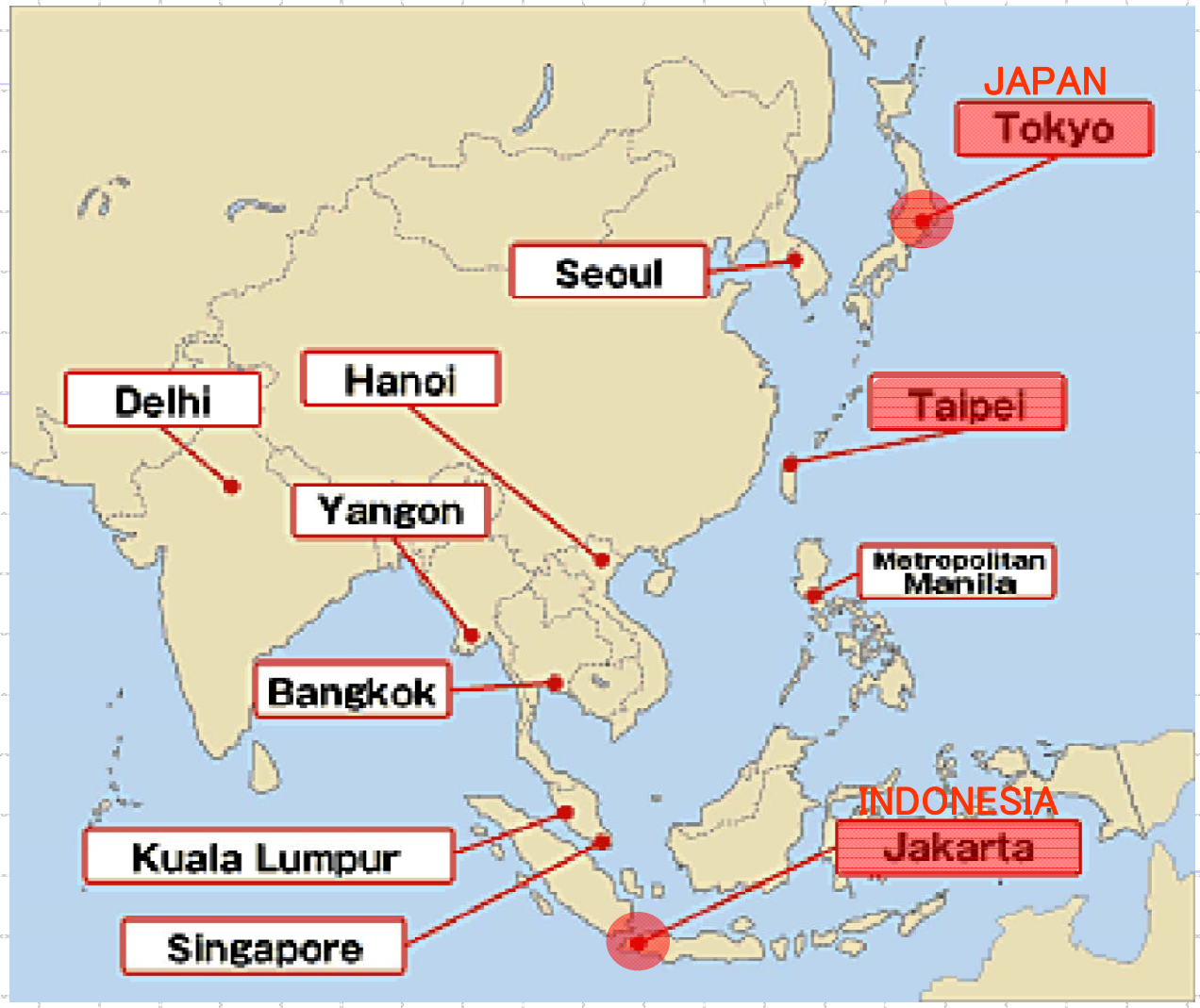
Part Ⅰ
Basic concept of public transport planning in Tokyo

July 6, 2010

Bureau of Urban development
Tokyo Metropolitan Government

Outline of Tokyo

JAPAN in Far East Asia



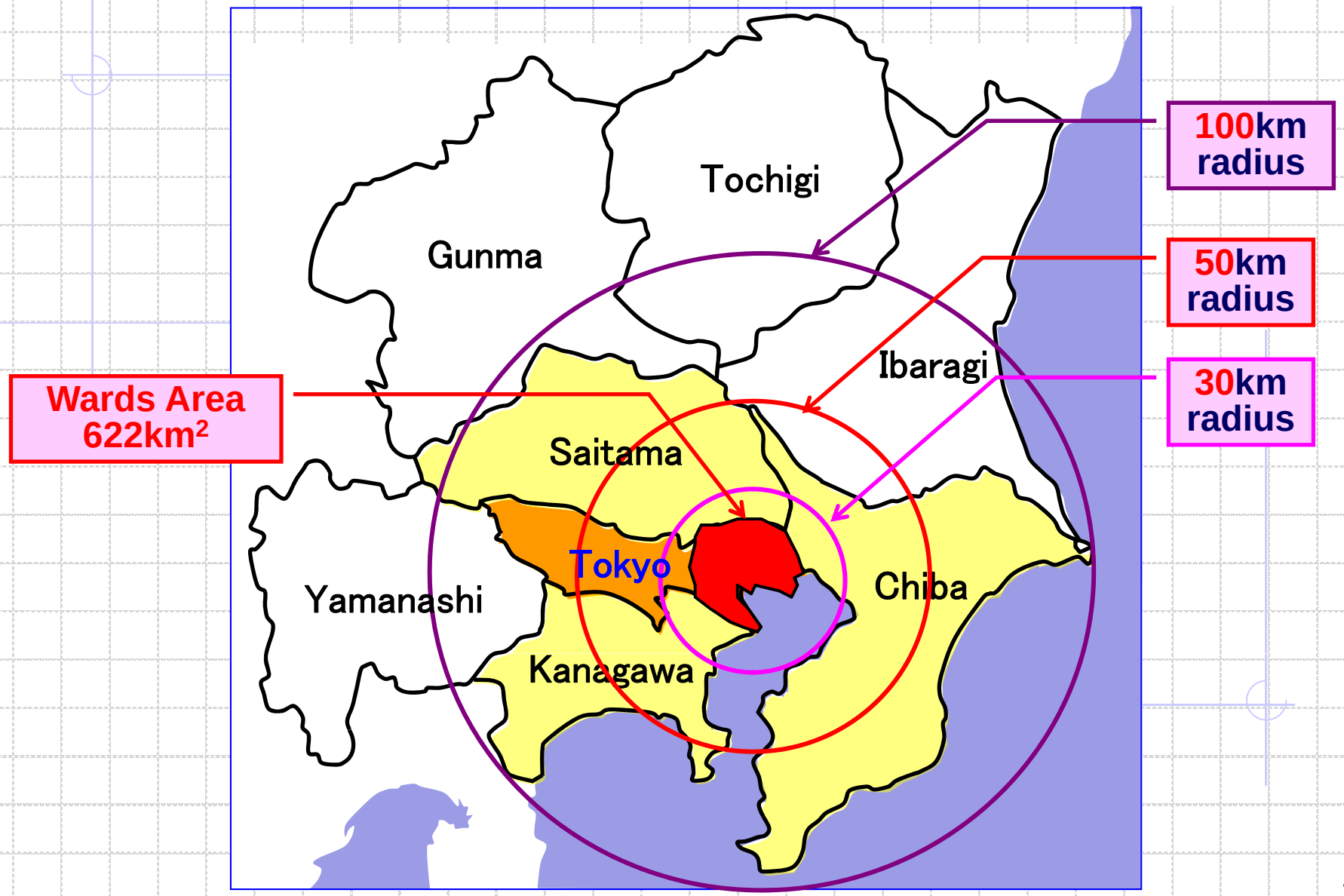
Source ：「ANMC21」

Comparison of Taiwan/Taipei, Indonesia/Jakarta and Japan/Tokyo

Country	Taiwan	Indonesia	Japan
Land area (km^2)	36,008	1,811,570	377,930*1
Population ($\times 10^3$)	23,016	228,248	127,771*1
Density (人/km2)	639	126	338
Railway (km)	1,694	7,985	27,343*2
City	**Taipei**	**Jakarta**	**Tokyo**
Land area (km^2)	272	662	2,187*3
Population ($\times 10^3$)	2,607	9,140	12,790*3
Density (人/km2)	9,685	13,807	5,847*3
Railway (km)	91	150	1,178*3

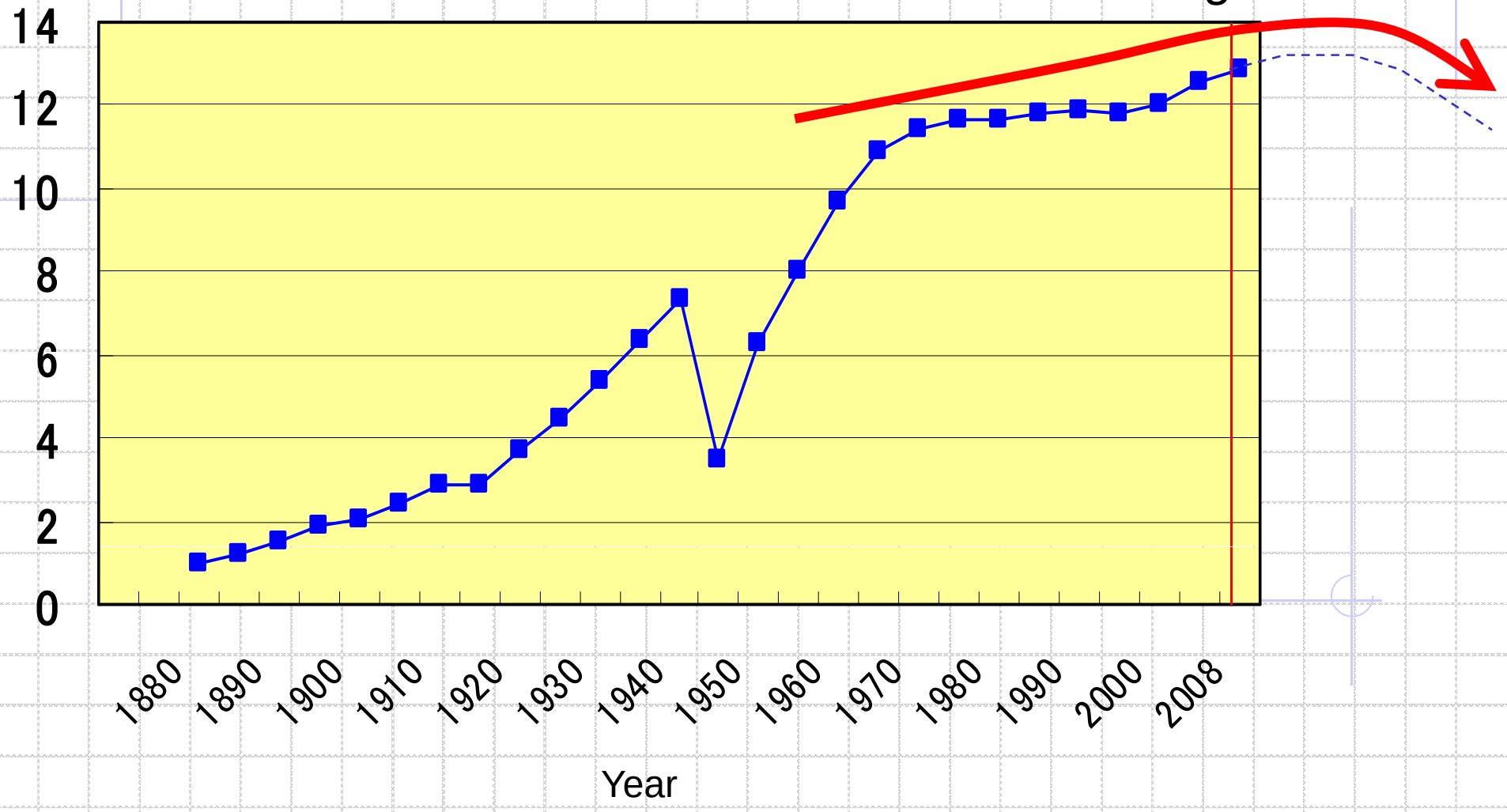
*1：Ministry of Internal Affairs and Communications
「Statistical Handbook of Japan 2009」
*2：Ministry of Land, Infrastructure, Transport and Tourism(2009)
*3：Tokyo Metropolitan Government(2009)

The metropolitan area

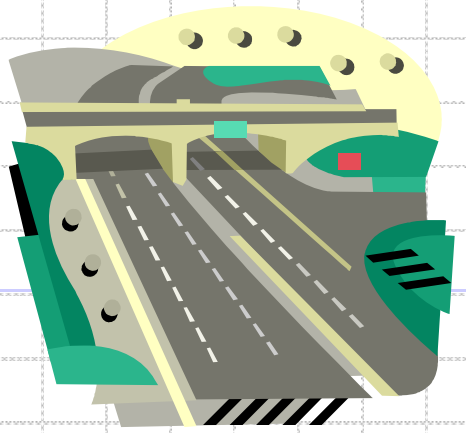


Tokyo Metropolis Population Trends

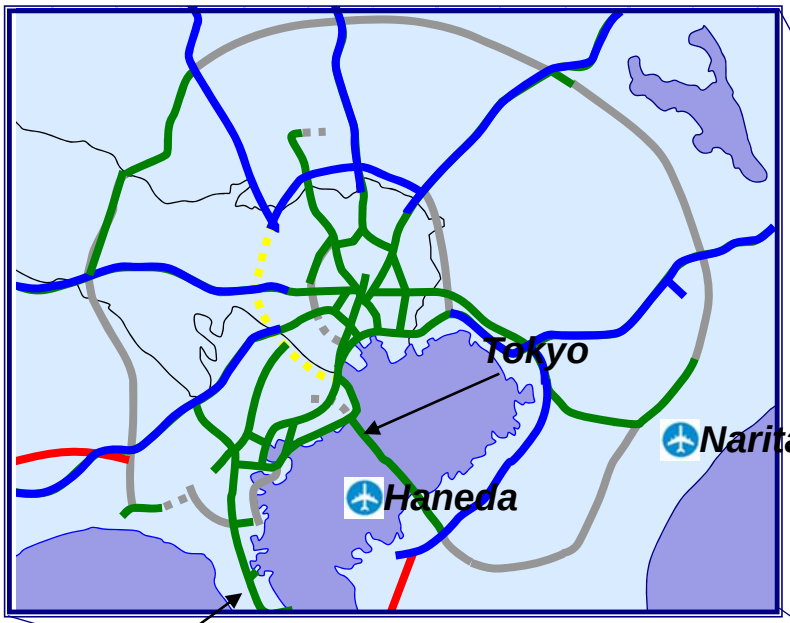
Gradually increasing ,
But estimated will be decreasing after 2015.

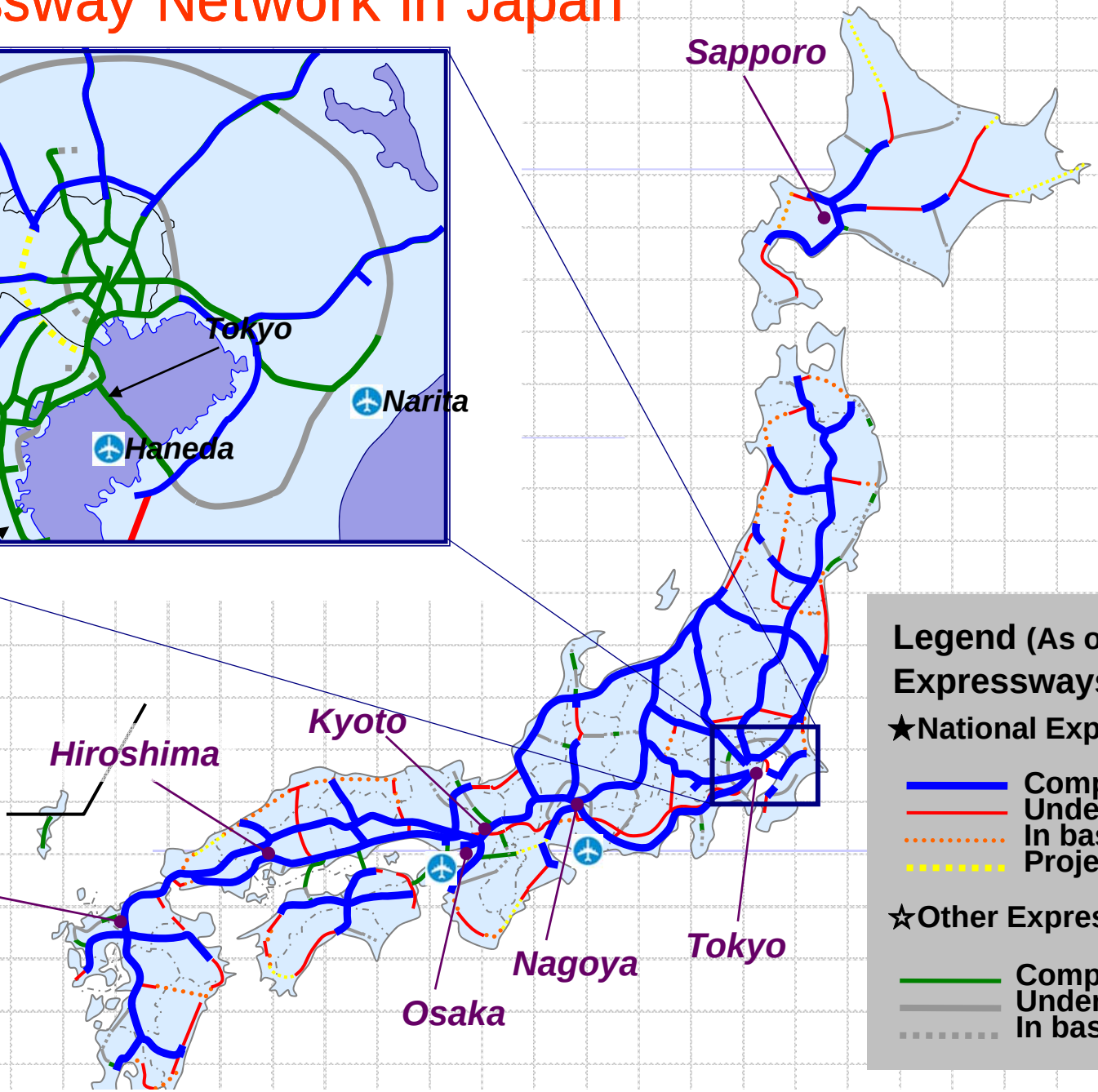


Outline of Road



Expressway Network in Japan





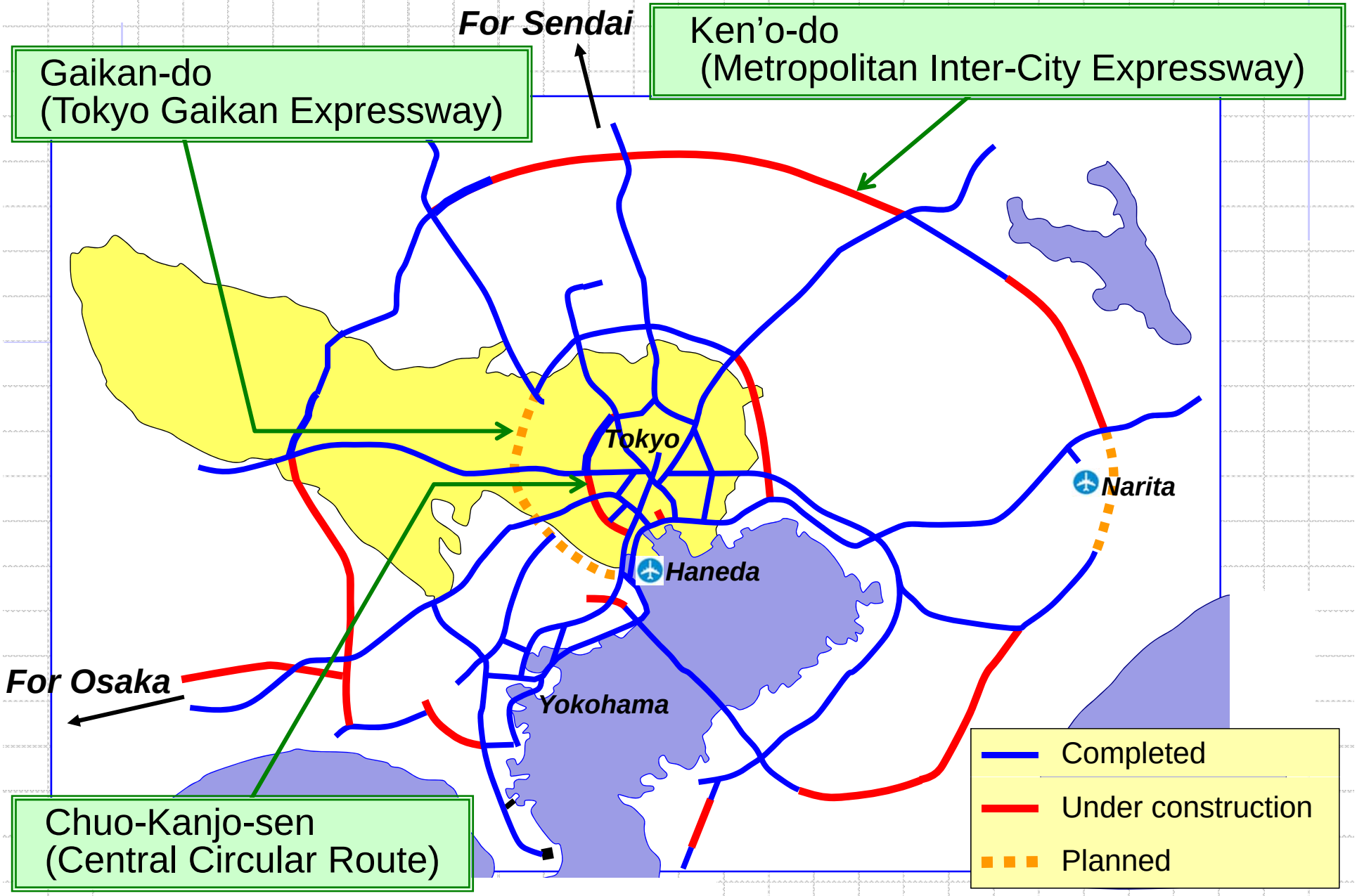
Legend (As of April. 2000)

Expressways (14,000km)

★National Expressways (11,520km)
- Completed
- Under construction
- In basic plan
- Projected route

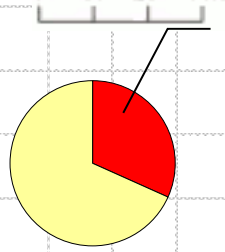
☆Other Expressways (2,480km)
- Completed
- Under construction
- In basic plan

Expressway Network in Tokyo



Completion Ratio of Loop Expressway Network

Tokyo

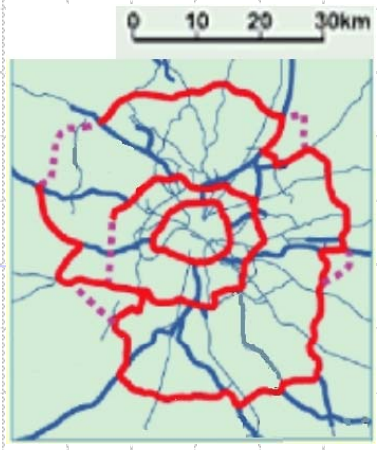


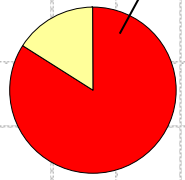
47% completed

Planned	522km
Completed	245km

【2009】

Paris



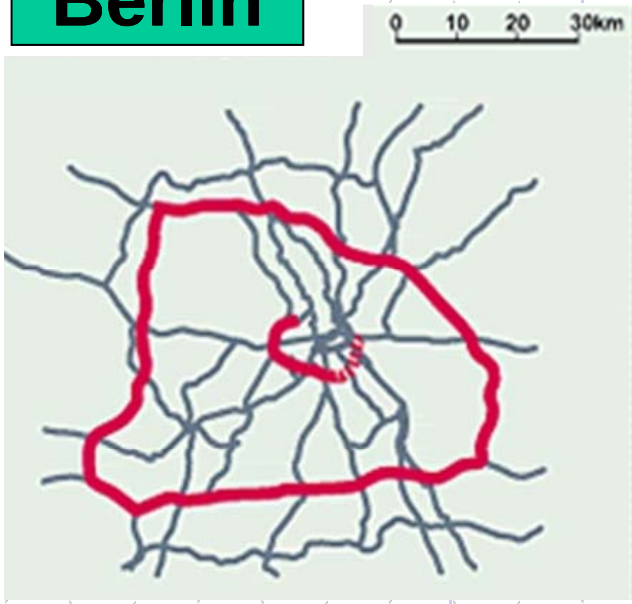


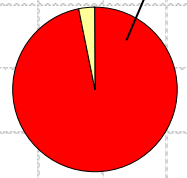
85% completed

Planned	313km
Completed	267km

【2009】

Berlin



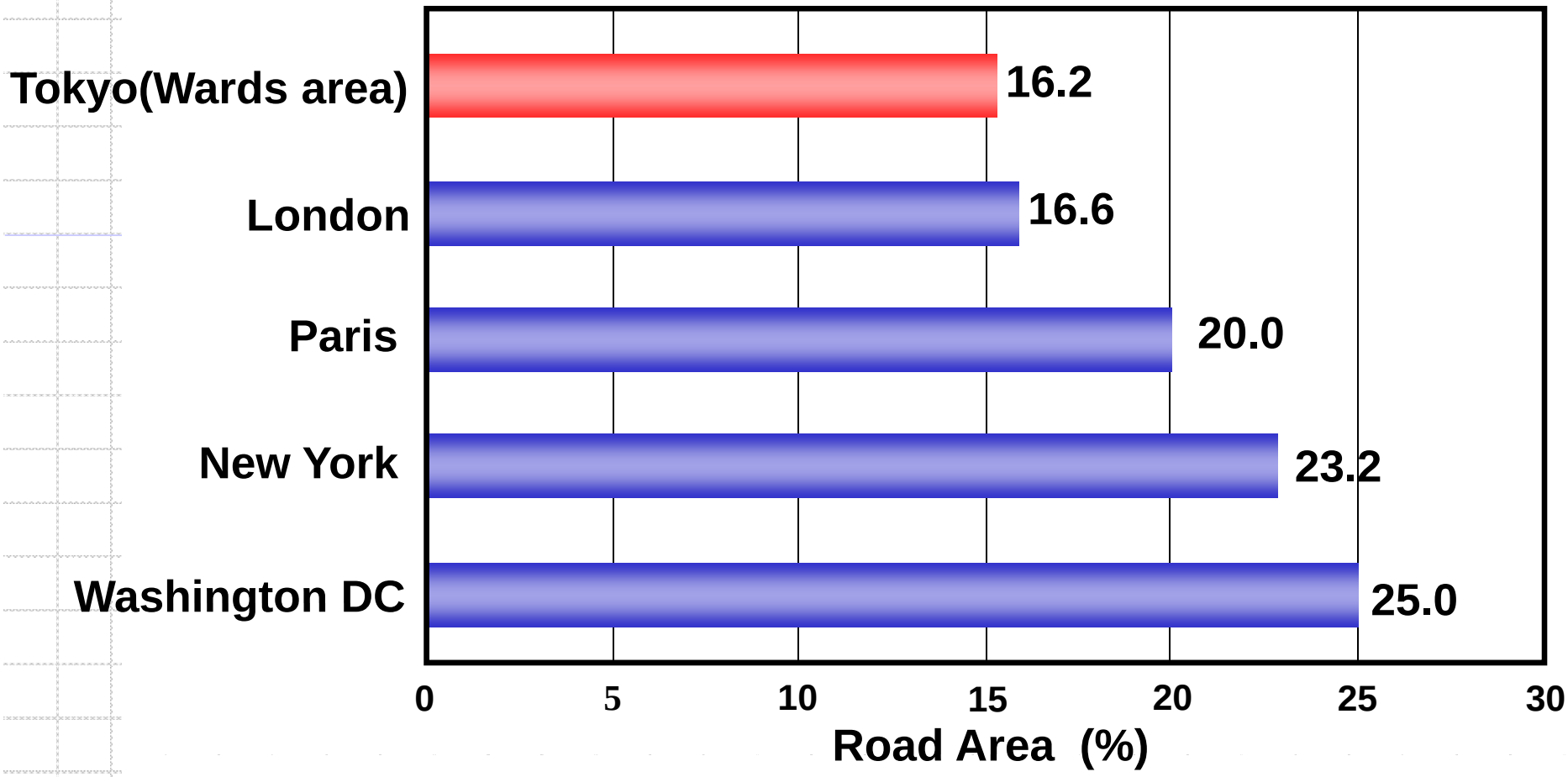


97% completed

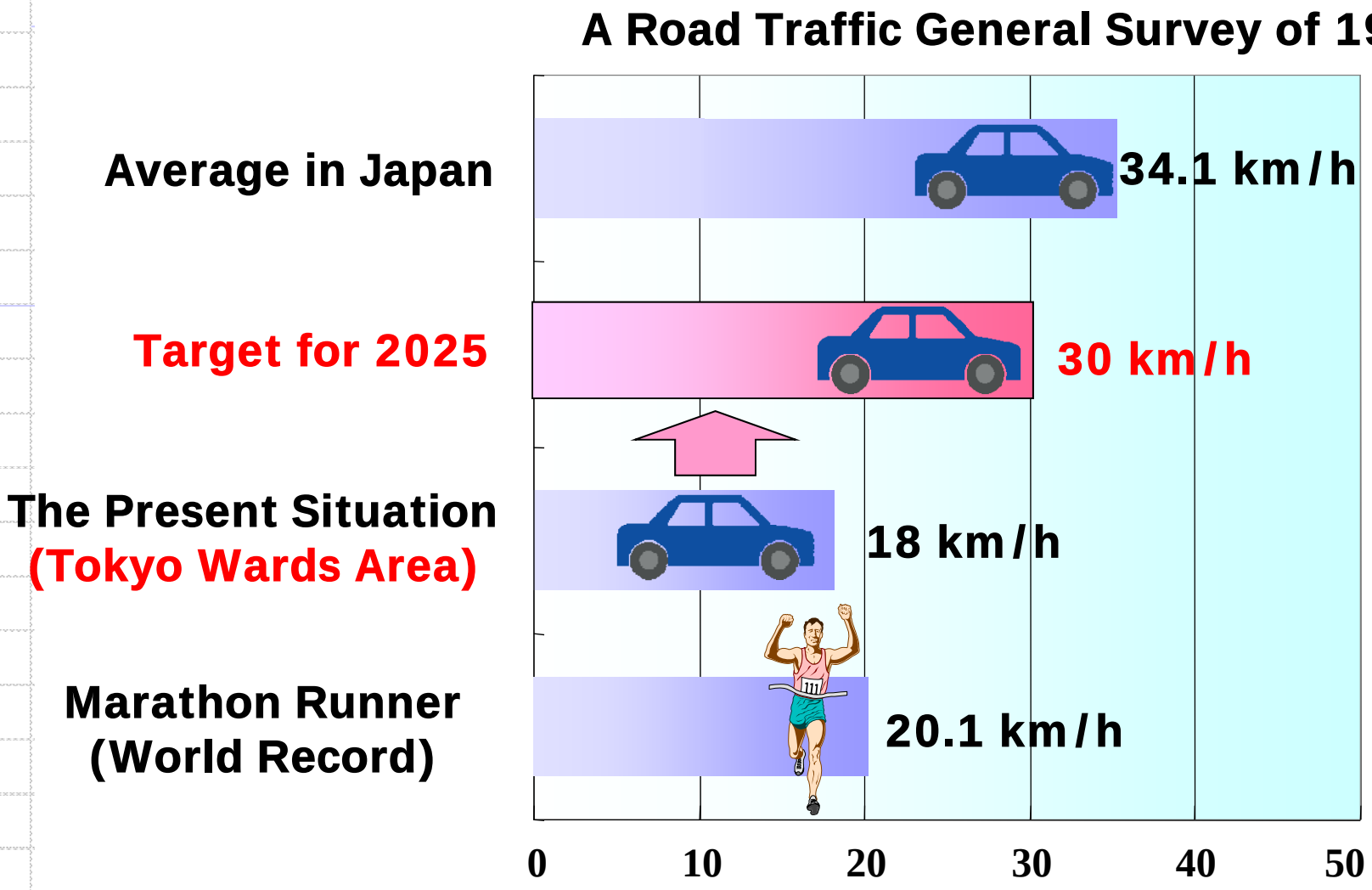
Planned	222km
Completed	217km

【2007】

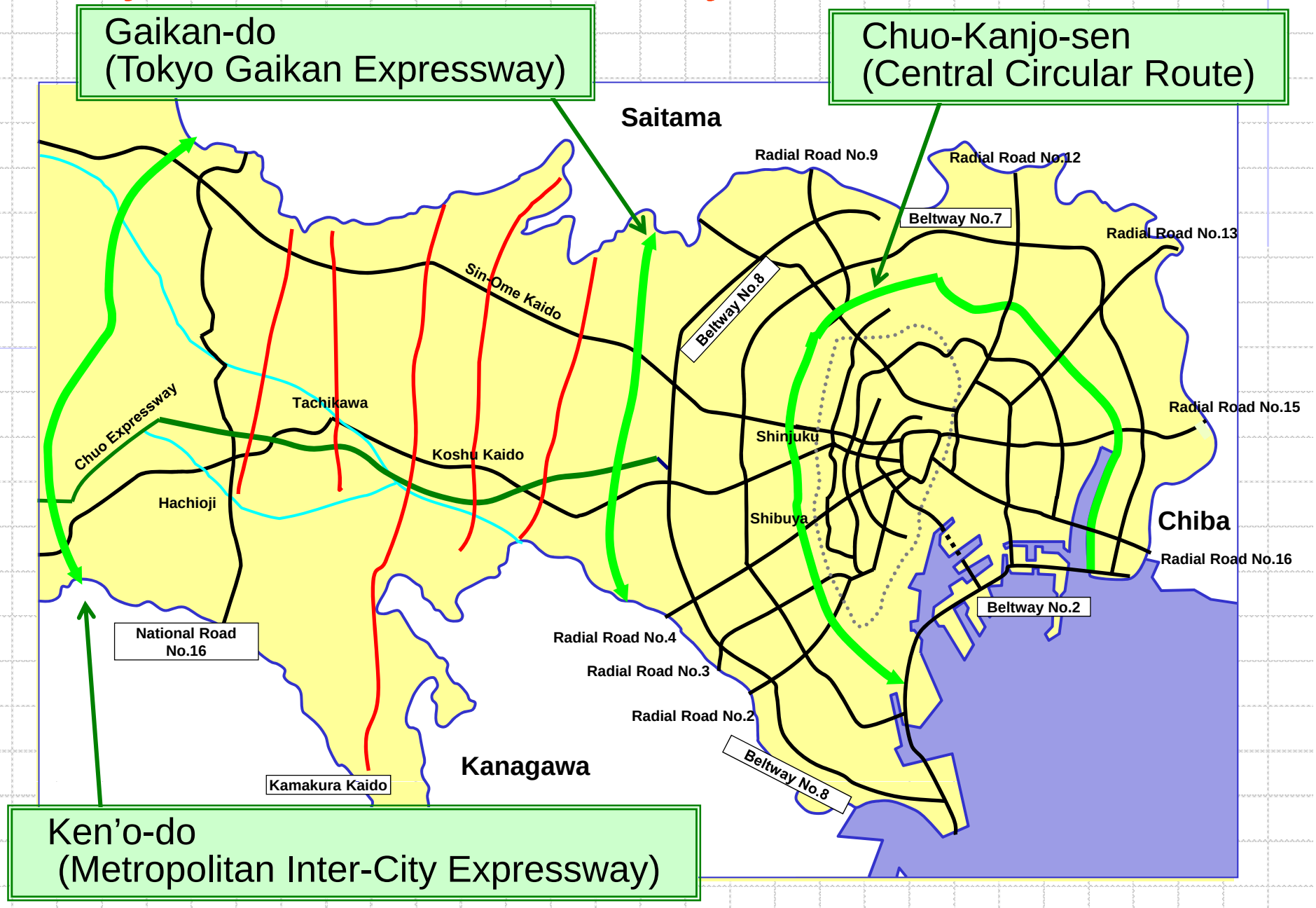
Comparisons of Road Density



Current State and Target of Average Trip Speed



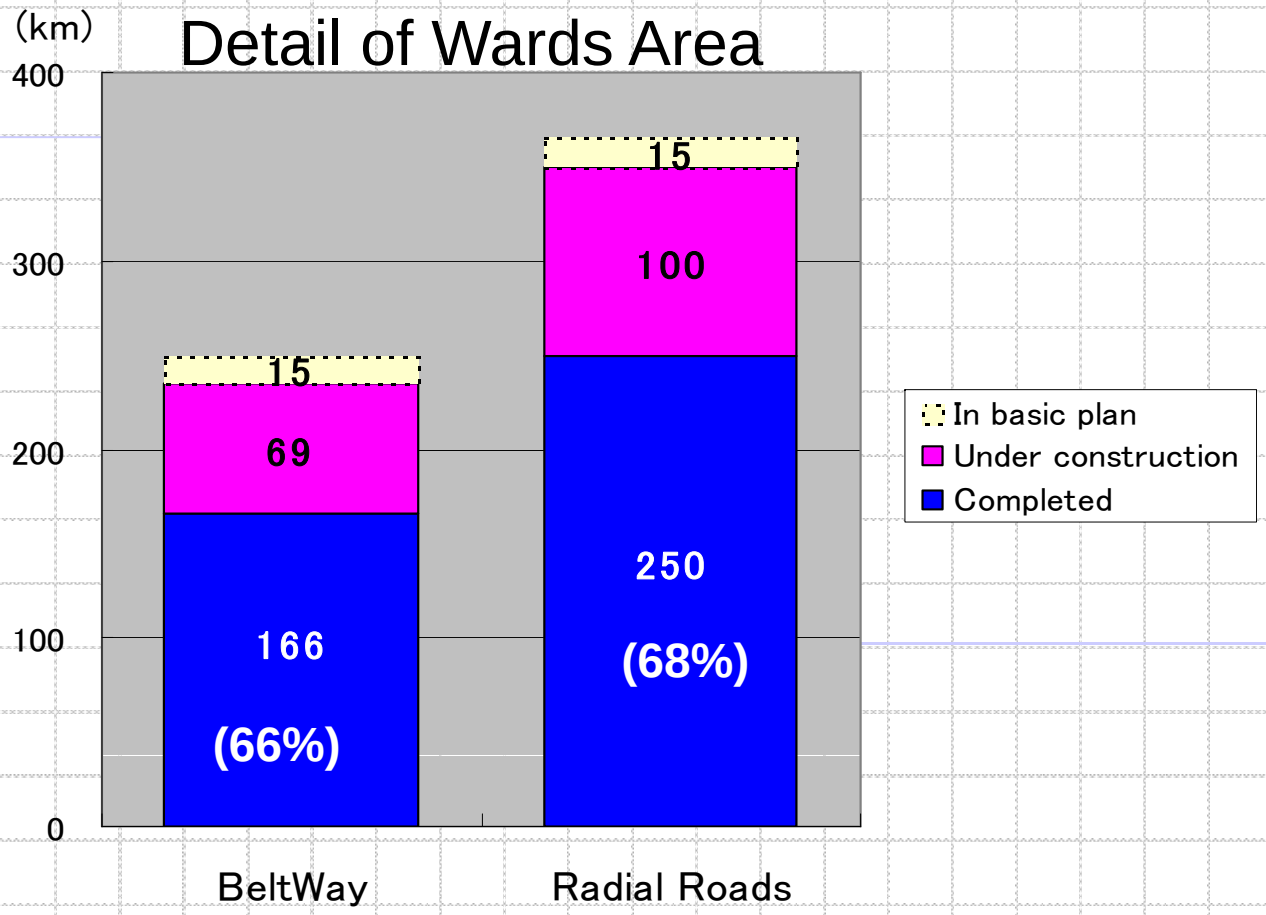
Major Roads Network in Tokyo



Development of City Roads 2009

	Completion Ratio	
Total	57%	
Wards Area	60%	Beltway 66%, Radial Roads 68%
Other Area	53%	

Detail of Wards Area



Promoting Transportation Demand Management (TDM)

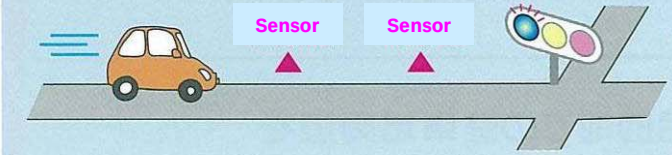
Transportation Friendly to People and the Environment

Promotion of Transportation Demand Management (TDM) Measures

Utilized ITS Technology

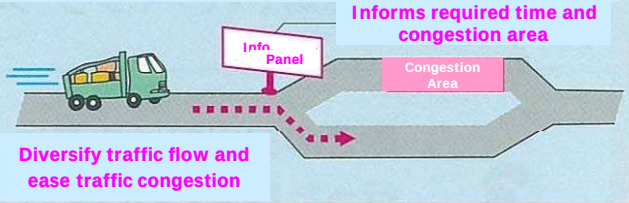
Demand-Forecasting Signal Control — **Improvement and Optimization of Signal Control**

By forecasting traffic flow, the optimal signal control can be achieved. Rapid change in traffic flow can be corresponded.

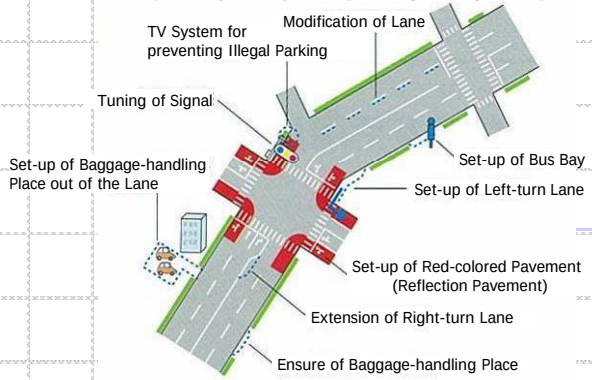


Traffic Information Panel — **Diversification of Traffic Demand**

Traffic information panels give driver the information on traffic congestion and necessary time. They also suggest driver to make a detour, so that the traffic demand is diversified.



Improved Road Facilities

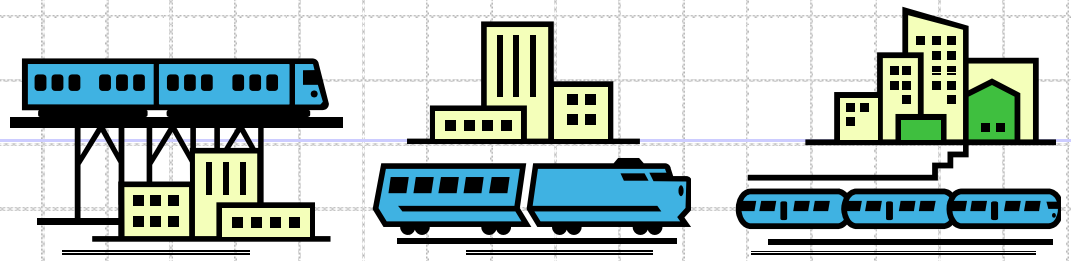


Measures for a baggage

Measures for Taxis waiting for customers

Source: Brochure “Hyper Smoothing Tactics”, (TMG, Tokyo PD, Tokyo Bureau of National Road）

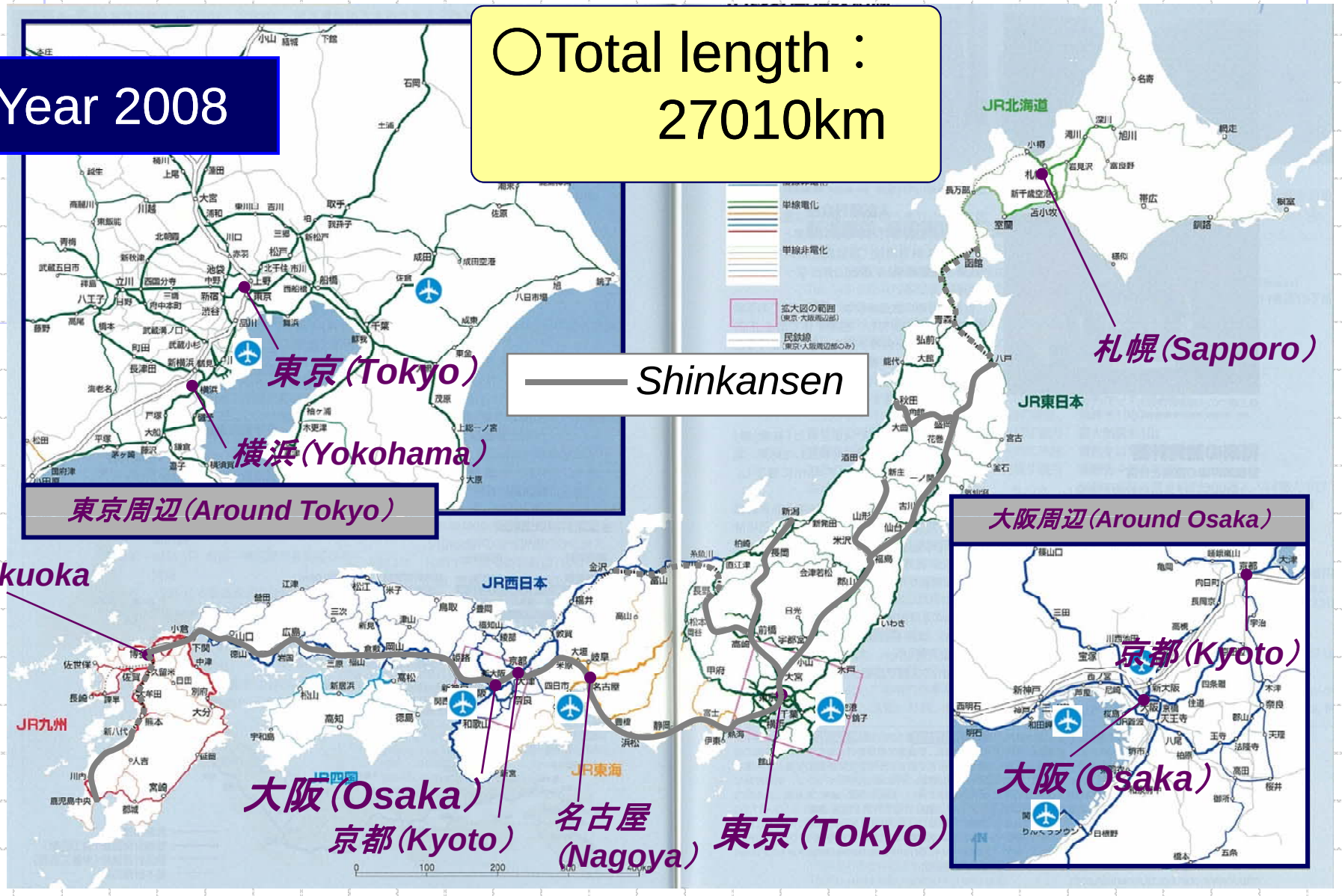
Outline of Railway



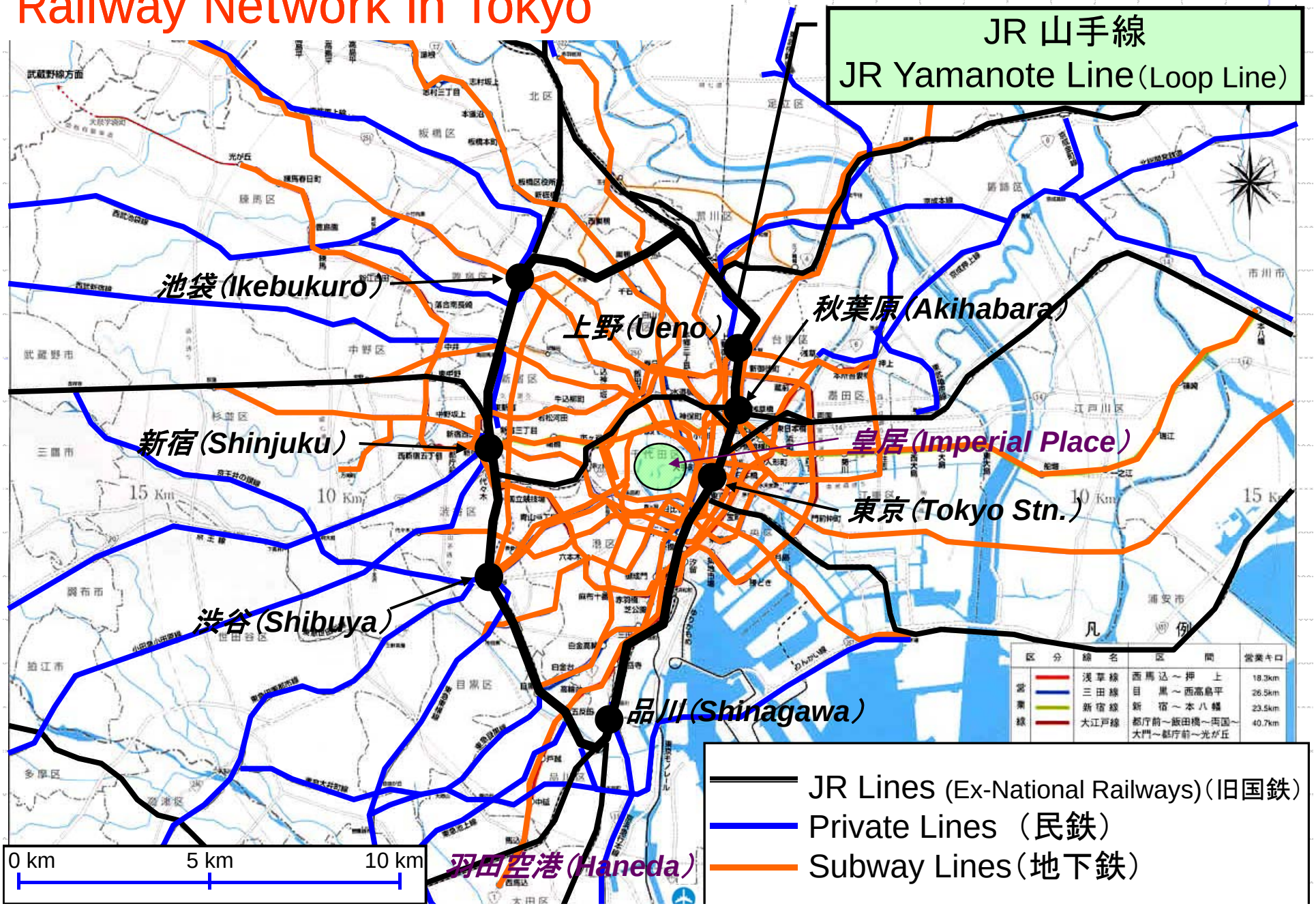
Railway Network in Japan

Year 2008

○Total length：
27010km



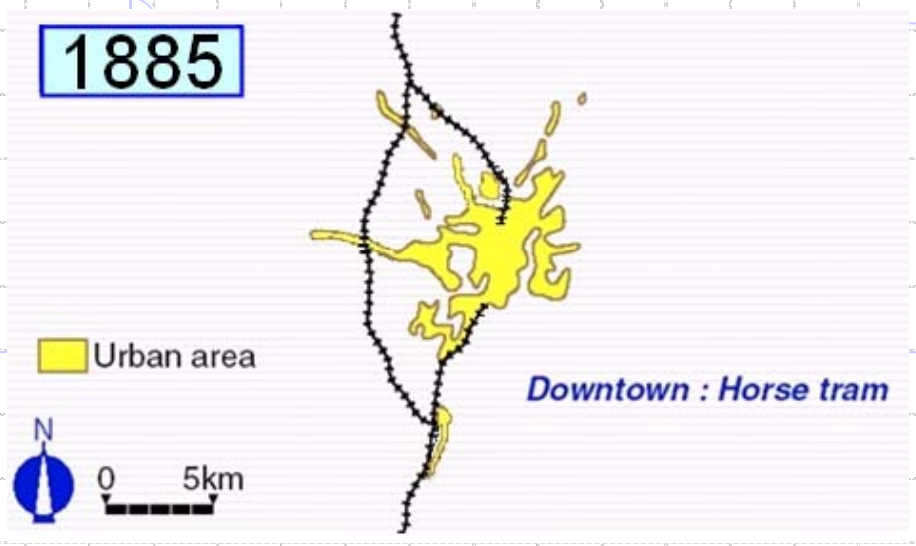
Railway Network in Tokyo

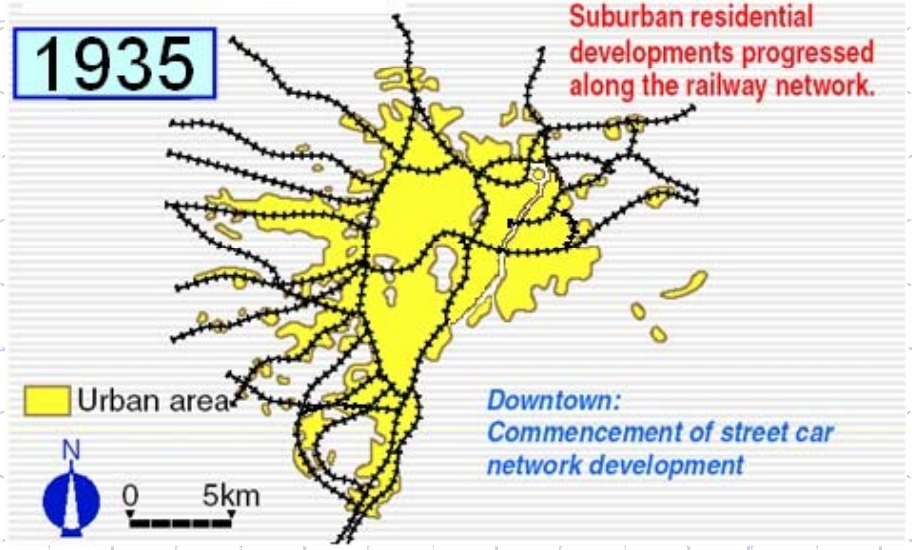


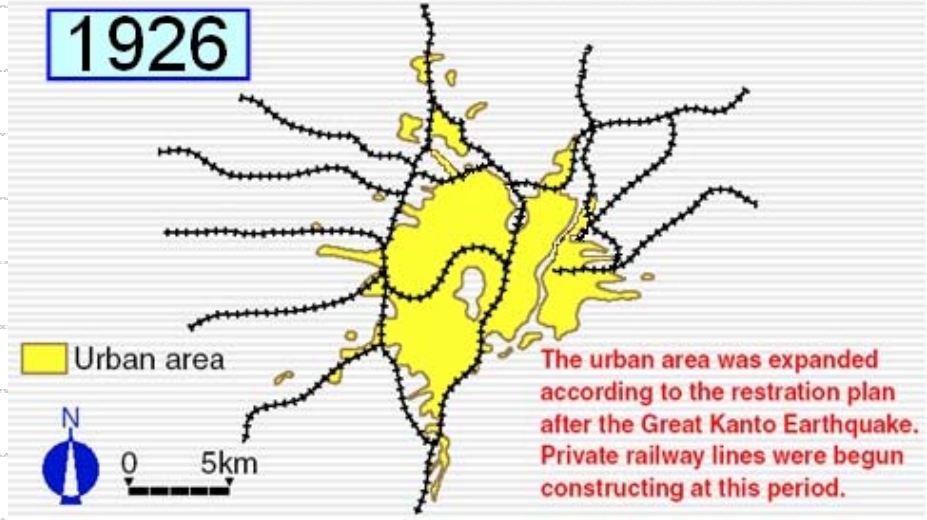
Characteristic of Railway in Tokyo

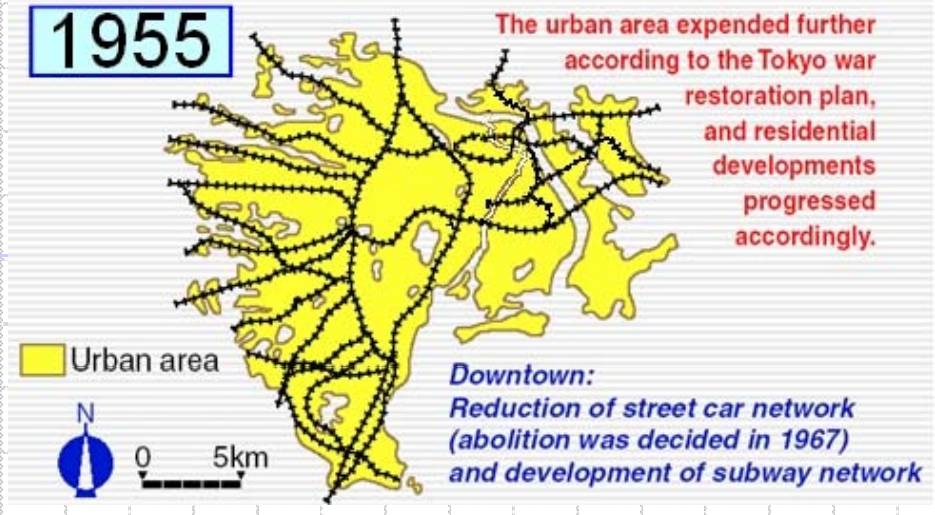
- Railway network in Tokyo carries 24 million passengers dail
- Peak-hour railroad operation interval: 1 to 2 min.
- Annual average delay per train: 0.7 min.

Development History of Railway Network to Expand the Metropolitan Area







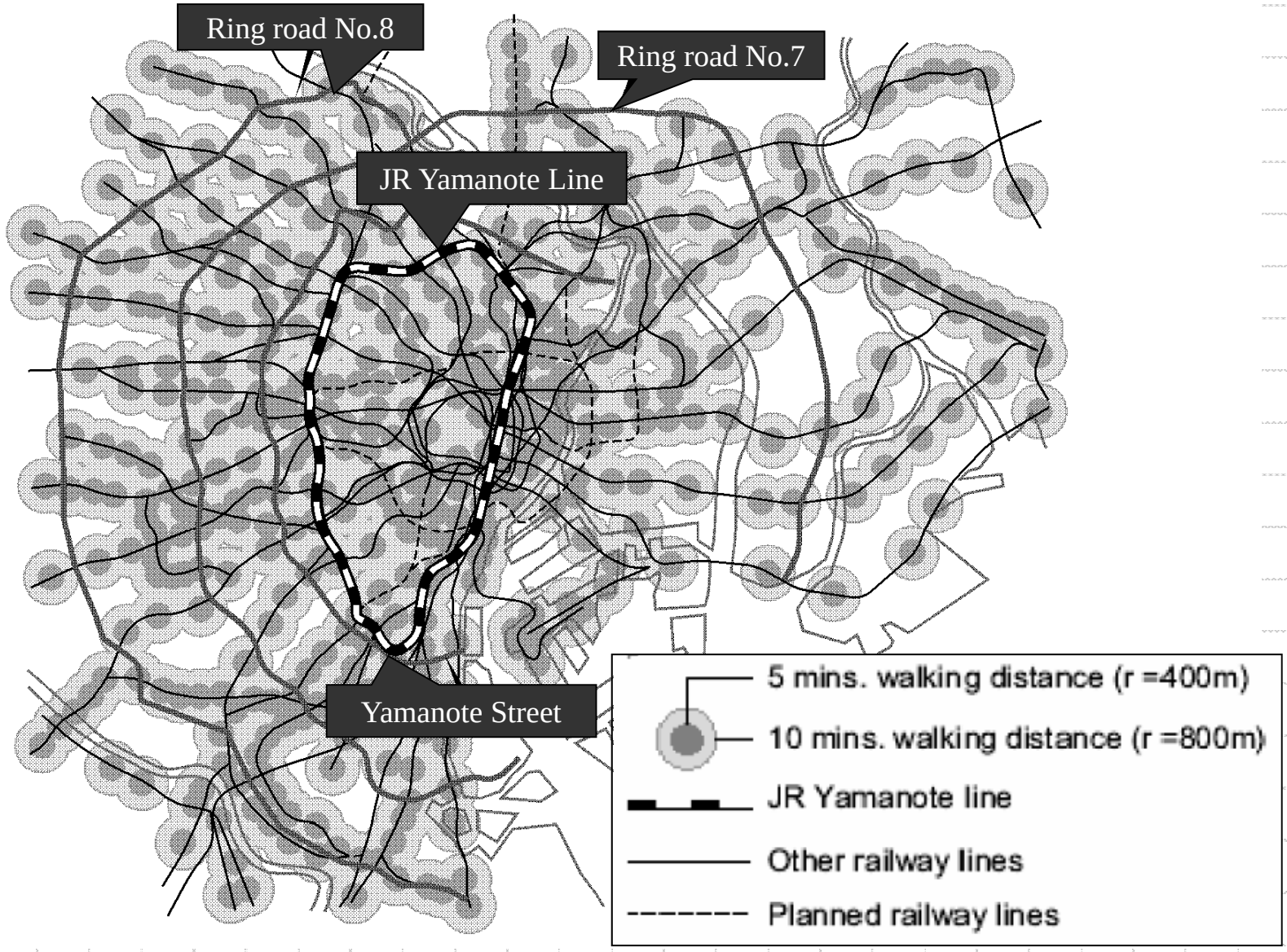


Railway Network in Tokyo

(Nov, 2009)

	Length	Number of Stations
JR Lines (Ex-National Railways) 	419km	141
Private Railways (7 major companies) 	354km	292
Subways (2 major companies) 	300km	234
Monorail, New Transit and Others 	76km	100
Total	1,178km	767

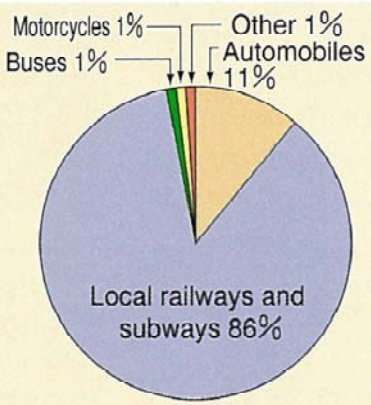
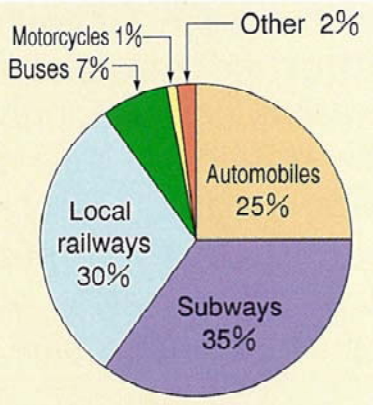
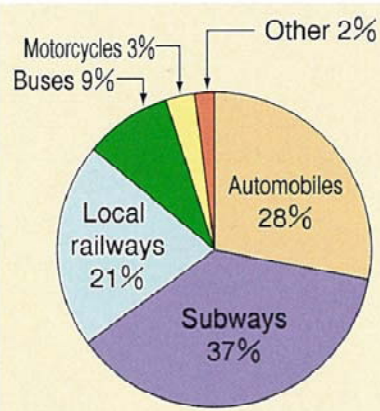
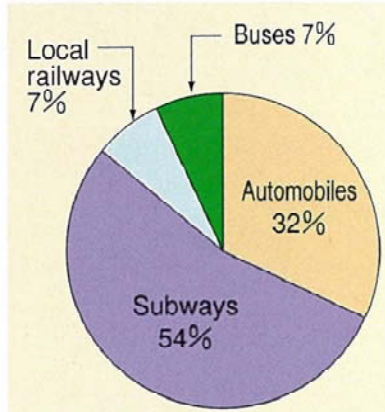
Zones accessible in 5 minutes,in 10 minutes walk from station



The Current Conditions of Urban Transportation in Tokyo

World-Leading Railway Line Development

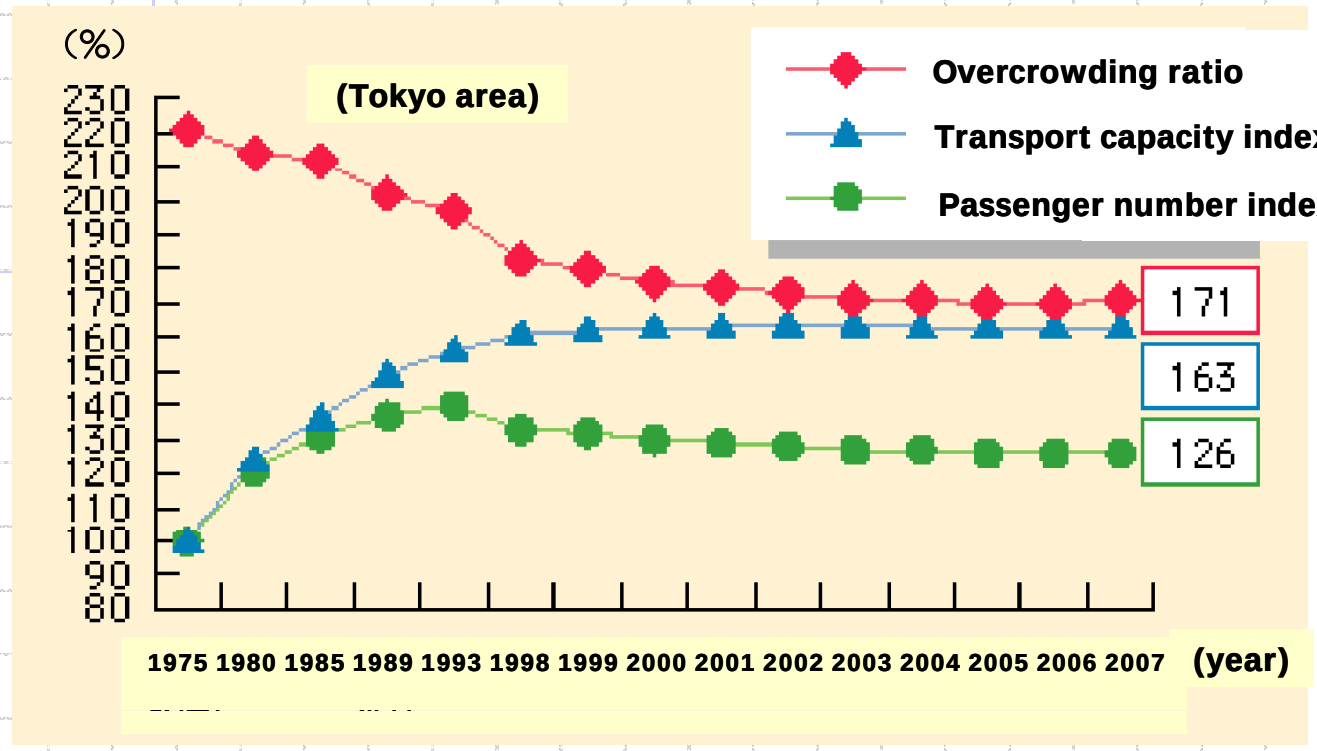
Comparisons of Route Density and Transportation Modes in Tokyo and Major Overseas Cities

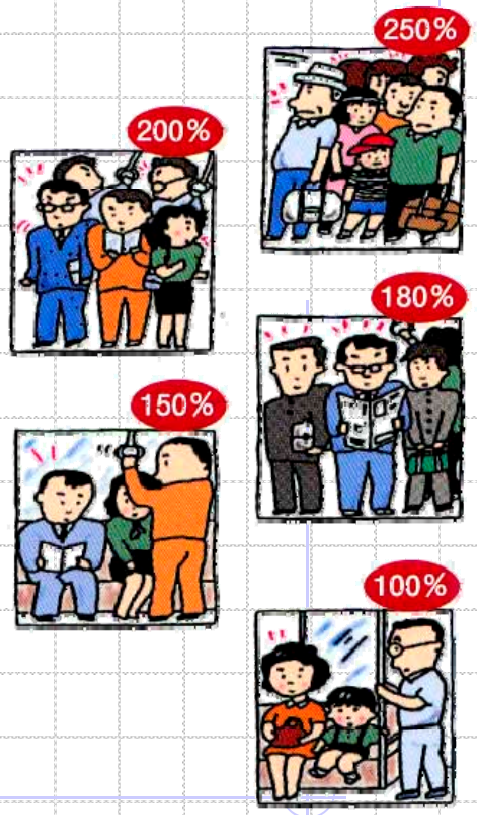
	Tokyo	London	Paris	New York
Route density (km/km²)	1.01	0.74	0.41	0.74
Shares of Movement by Transportation Mode				

Source: "Urban Transportation in Metropolis (1999)"

The Current Conditions of Urban Transportation in Tokyo

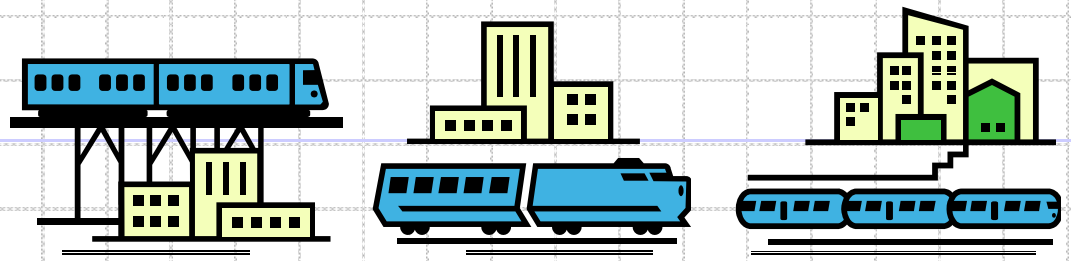
Railway Crowding





Source：「WHITE PAPER ON MLIT IN JAPAN (2008)」

Improvement of Railway



Policy Report of the Council for Transport

◆A basic plan

concerning the development of transport links on the rapid-transit railway in Tokyo metropolitan area

◆History

policy report of the council for transport revised almost every 10 to 15 years recently.

1956 Policy Report of the Council for Urban Transport No.1
1962 Policy Report of the Council for Urban Transport No.6
1968 Policy Report of the Council for Urban Transport No.10
1972 Policy Report of the Council for Urban Transport No.15
1985 Policy Report of the Council for Transport No.7
2000 Policy Report of the Council for Transport No.18

Policy Report No.18 of the Council for Transport

(Issued in January, 2000)

◆Target year ⇒ 2015

◆Basic Aspects

1) Decrease average ratio of train congestion future target 150% at peak time

2) Improve express service

3) Ease access to airport and Shinkansen

4) Make traffic service barrier-free and seamless

Planned Route of Policy Report No.18

Planned Route A1

Route that should be opened by 2015

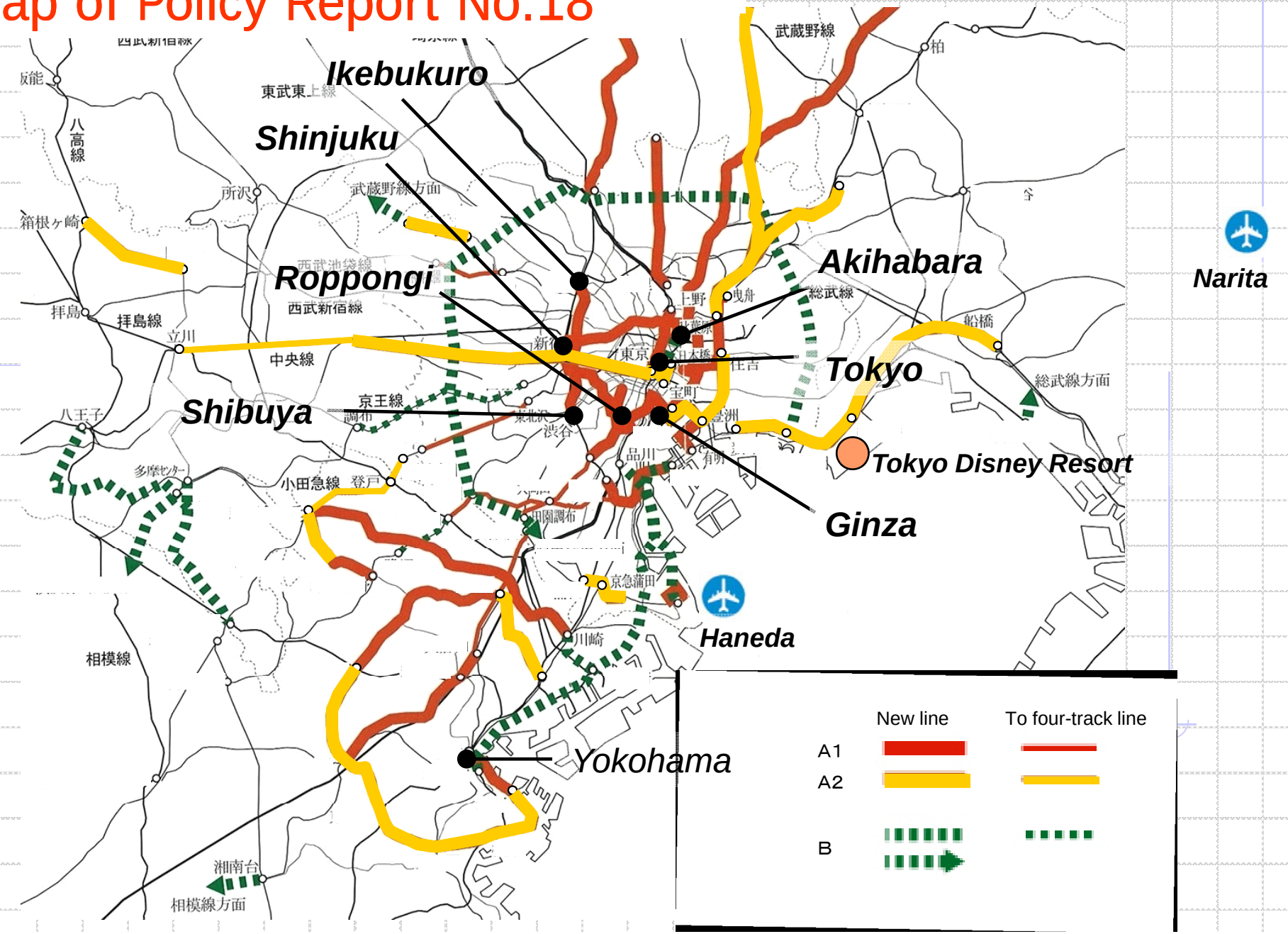
Planned Route A2

Route that should start building by 2015

Planned Route B

Route that construction
should be examined in the future

Map of Policy Report No.18



Oedo Line (Subway Line No. 12)　Route A1

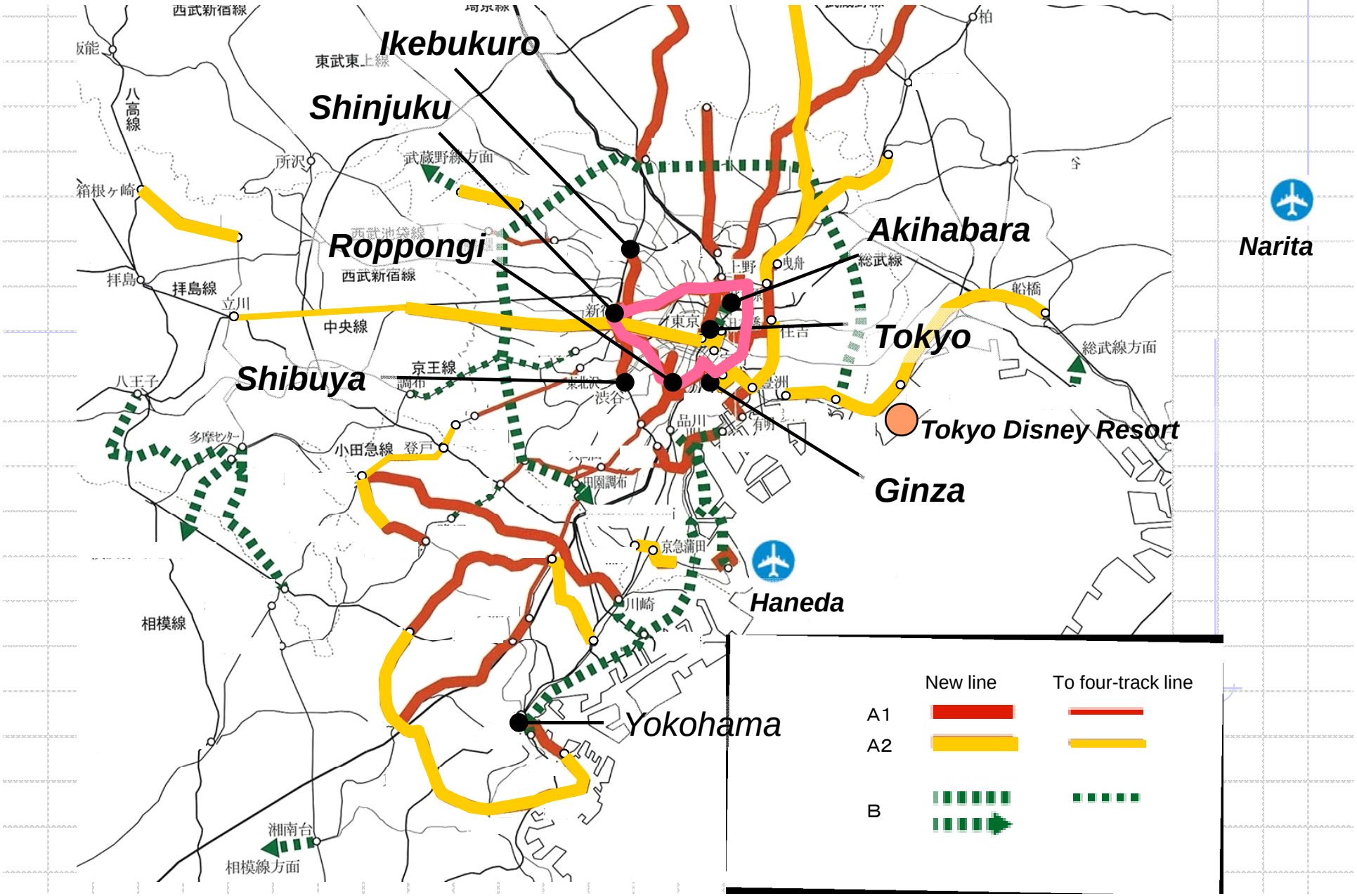
Development costs : 1,400 billion yen (34 bil.yen/km)

Total length : 41 km　Number of stations : 38

Number of passengers : 782,000/day (2007)

Opened: Dec. 2000

Oedo Line (Subway Line No. 12)　Route A1



Fukutoshin Line (Subway Line No. 13)　Route A1

Operation:
One-man driving
by ATO system

Development costs : 250 billion yen (28 bil.yen/km)

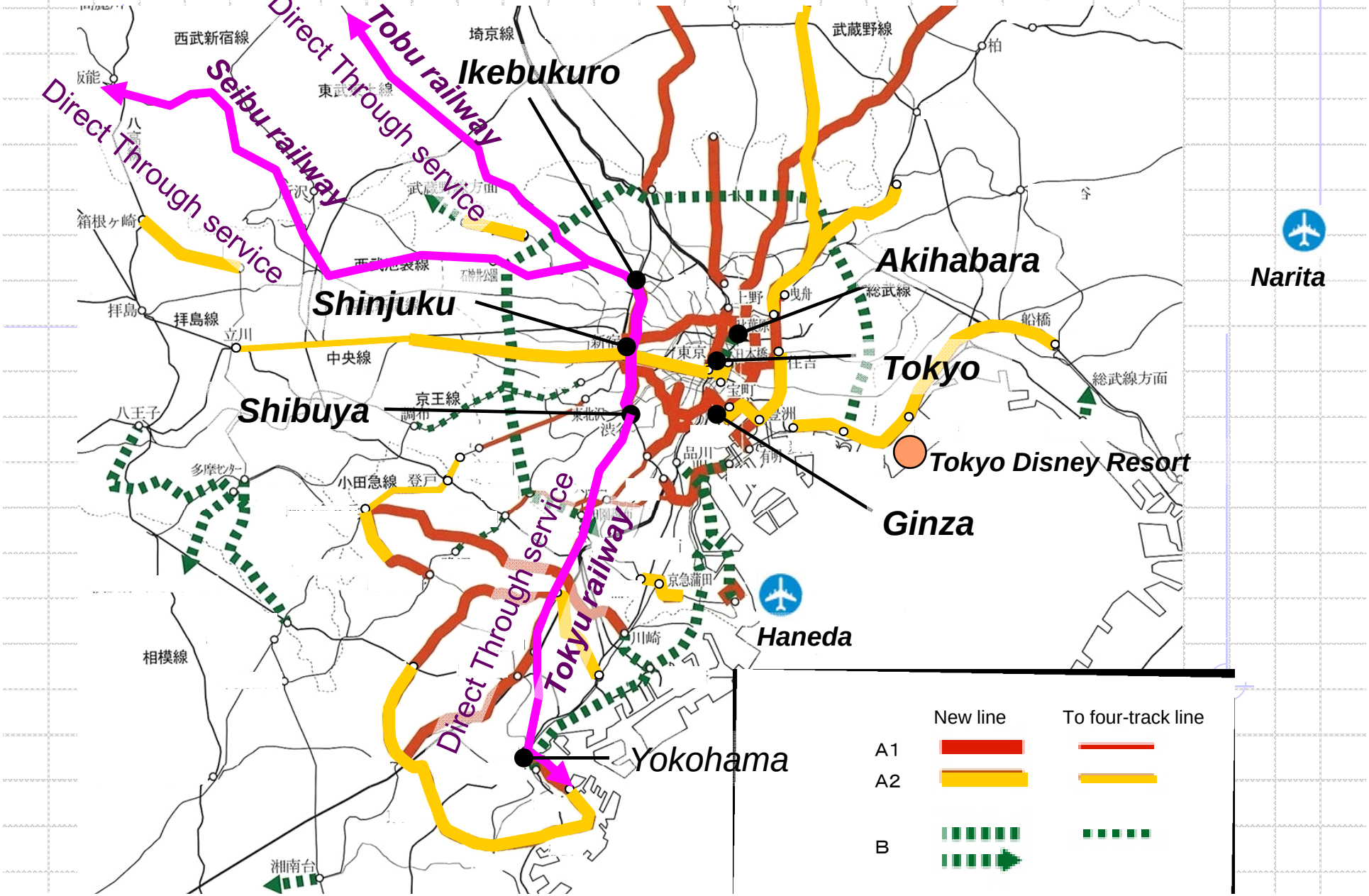
Total length : 8.9km (Ikebukuro-Shibuya)

Number of stations : 9 (New open)

Number of passengers 259,000/day (2008)

Opened: Jun. 2008

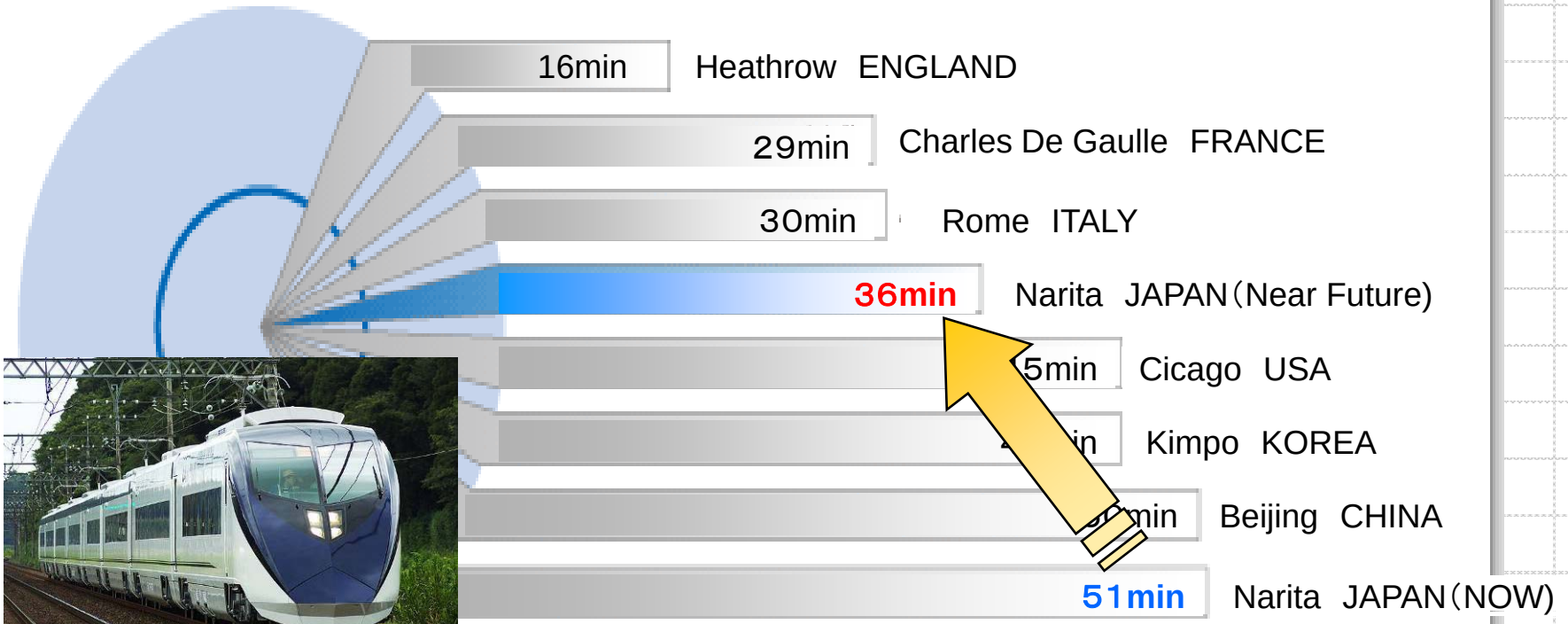
Fukutoshin Line (Subway Line No. 13)　Route A1



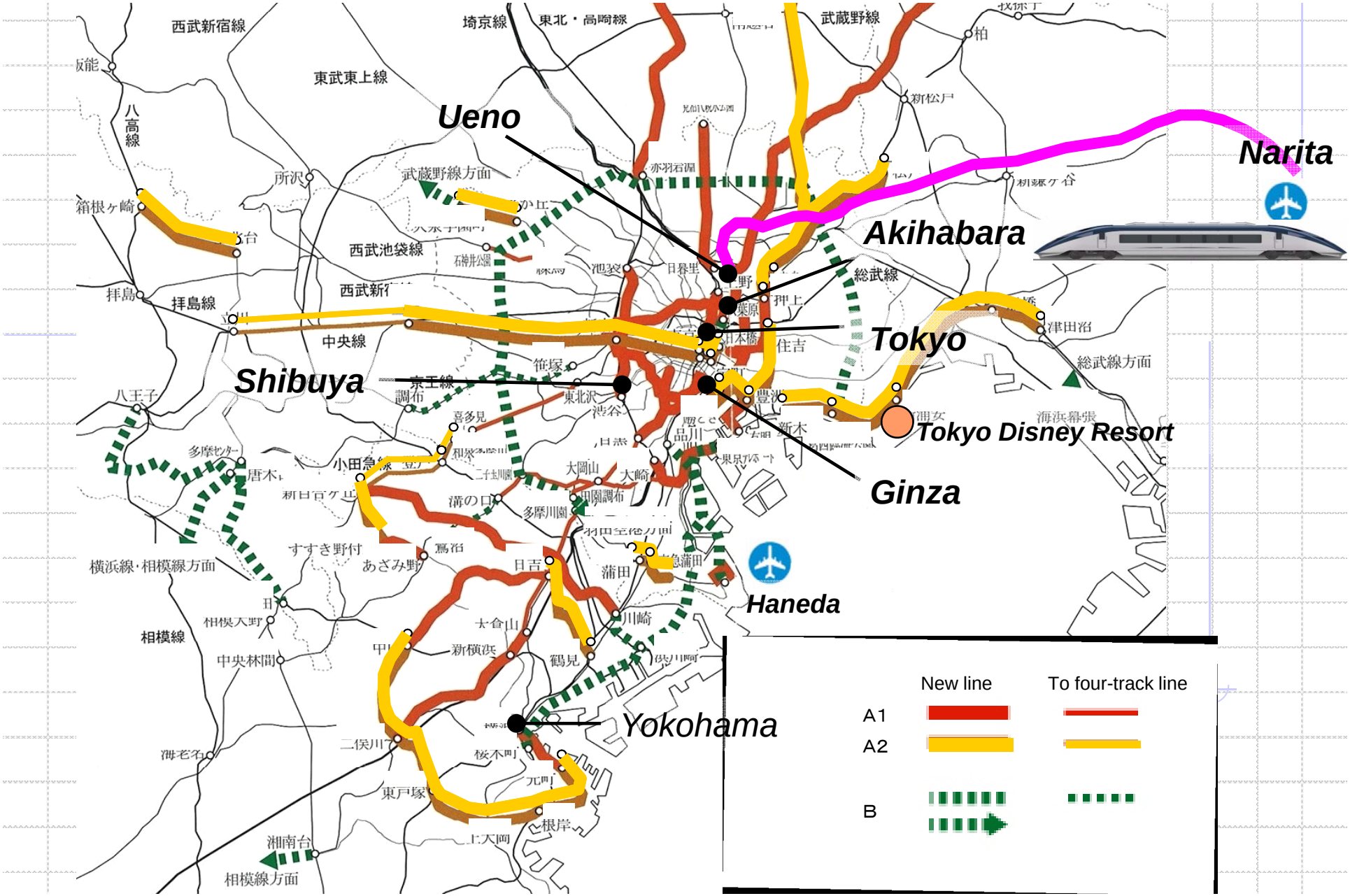
Narita Rapid Railway to Narita Airport Route A1

In fiscal 2010, Narita rapid railway will be opened.
Connect the center of Tokyo with Narita Airport in 36 minutes

Access Time from the Main Airport of the World CIties



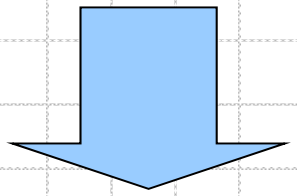
Narita Rapid Railway to Narita Airport Route A1



Current State of A1, A2 and B Routes

- **All A1 Routes** have already opened or been under construction
- but, **Any A2 and B Routes** are not even begun to start construction

Problems



1 Finding the entity who will raise his hand
2 Securing the funds for huge project expense
3 Improving of profit margin

Subsidy System for Railway Development

Traditional Way of Construction of Railways

100% loan or funds

Subsidy System for Subways

Nation 25%	Local G 28%	Loan or Funds 47%

Subsidy 53%

New Subsidy System for improvement of urban rail service project

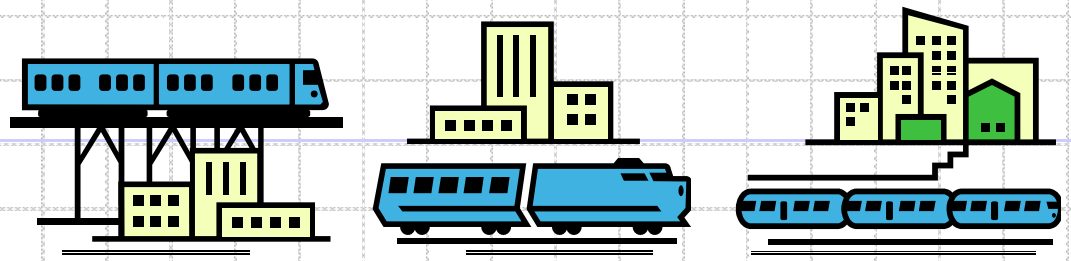
Nation 1/3	Local G 1/3	Loan or Funds 1/3

Subsidy 66%

■In Japan, private railways had been constructing their new lines by their own finance.

■However, in Metropolitan area, to conquer those problems and promote construction of necessary lines, various subsidy systems are established.

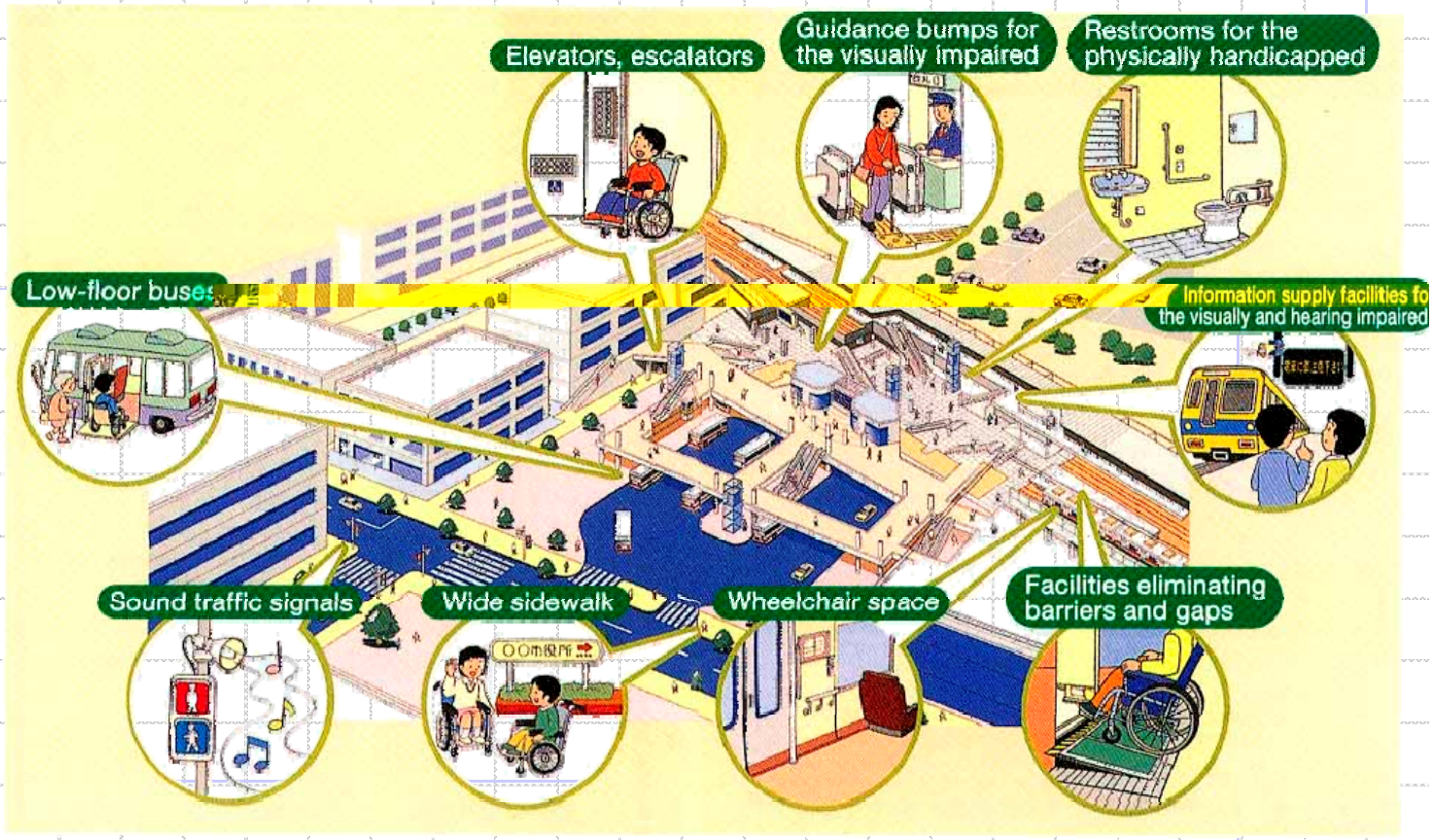
Promoting Barrier-free Facilities



Transportation Friendly to People and the Environment

Promoting Barrier-Free Facilities

Under the Accessible and Usable Transportation Law, upon new construction of stations and other passenger facilities, newly introducing buses or other types of vehicles or in other circumstances, compliance with barrier-free standards is required. Likewise, under the guidance of individual municipalities schemes are incorporated to achieve barrier-free facilities in stations, nearby roads, traffic signals and other infrastructure. This leads to advances in barrier-free status in stations, nearby roads and other amenities.

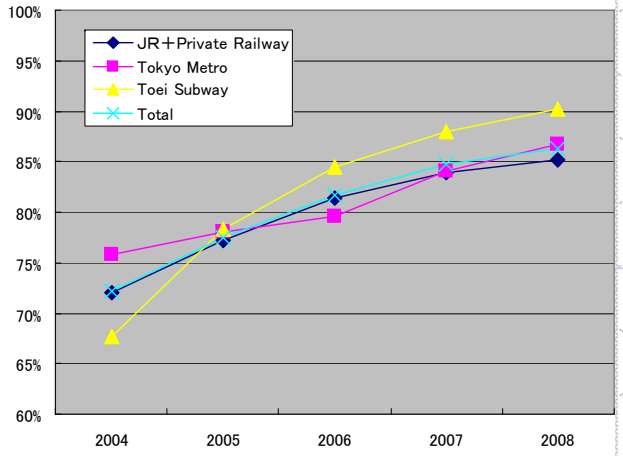


Source : “On Land , Infrastructure and Transportation 2001 White Paper”

The Current Conditions of Urban Transportation in Tokyo

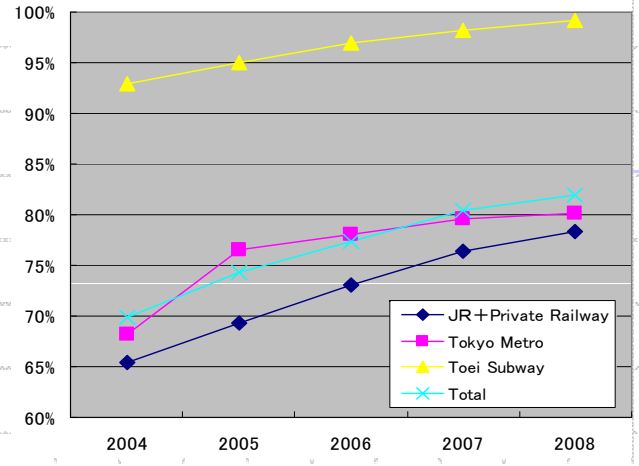
"Barrier-Free" Improvements

The setting situation of elevators and escalators in the Tokyo railway stations



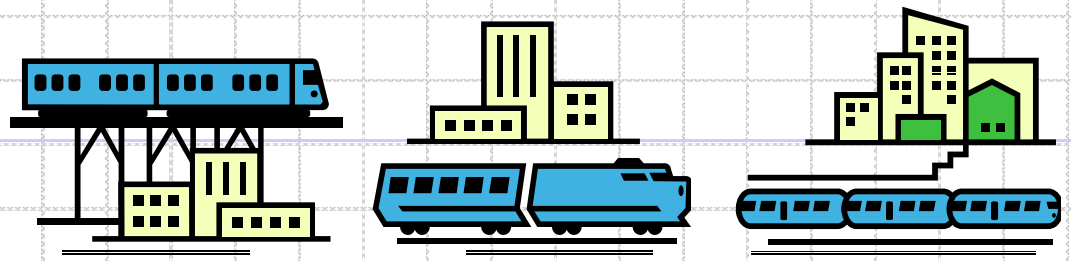
EV・ES	2004	2005	2006	2007	2008
JR+ Private Railway	72.0%	77.1%	81.4%	83.9%	85.1%
Tokyo Metro	75.8%	78.0%	79.5%	84.1%	86.8%
Toei Subway	67.7%	78.3%	84.5%	88.0%	90.1%
Total	72.1%	77.5%	81.6%	84.7%	86.3%

The setting situation of barrier-free restrooms in the Tokyo railway stations



Stations with barrier-free restrooms	2004	2005	2006	2007	2008
JR+ Private Railway	65.4%	69.4%	73.1%	76.5%	78.4%
Tokyo Metro	68.2%	76.5%	78.0%	79.5%	80.1%
Toei Subway	92.9%	94.9%	97.0%	98.2%	99.1%
Total	69.8%	74.3%	77.4%	80.4%	81.9%

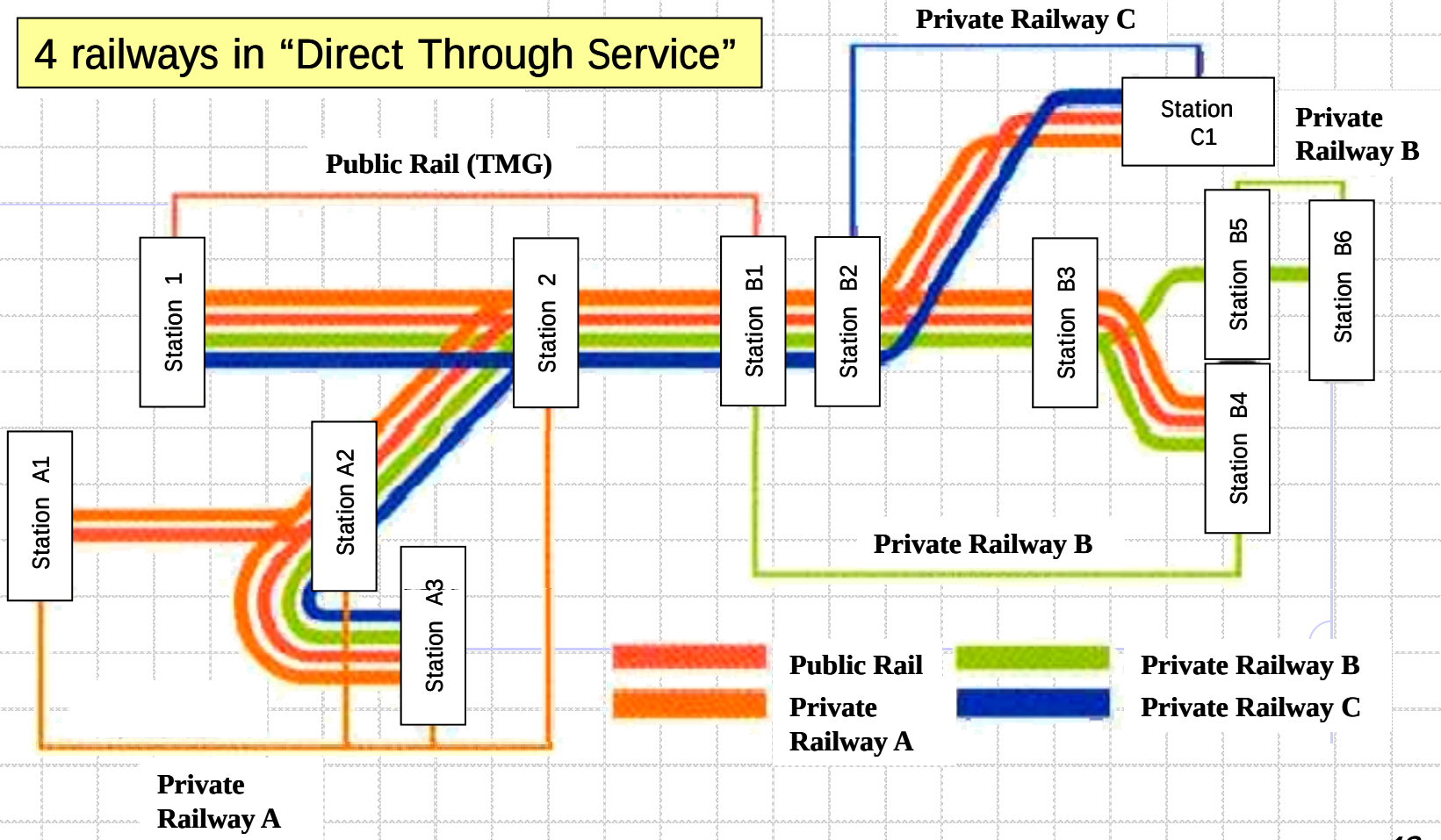
Promoting Seamless Transportation



Transportation Friendly to People and the Environment

Promoting Seamless Transportation

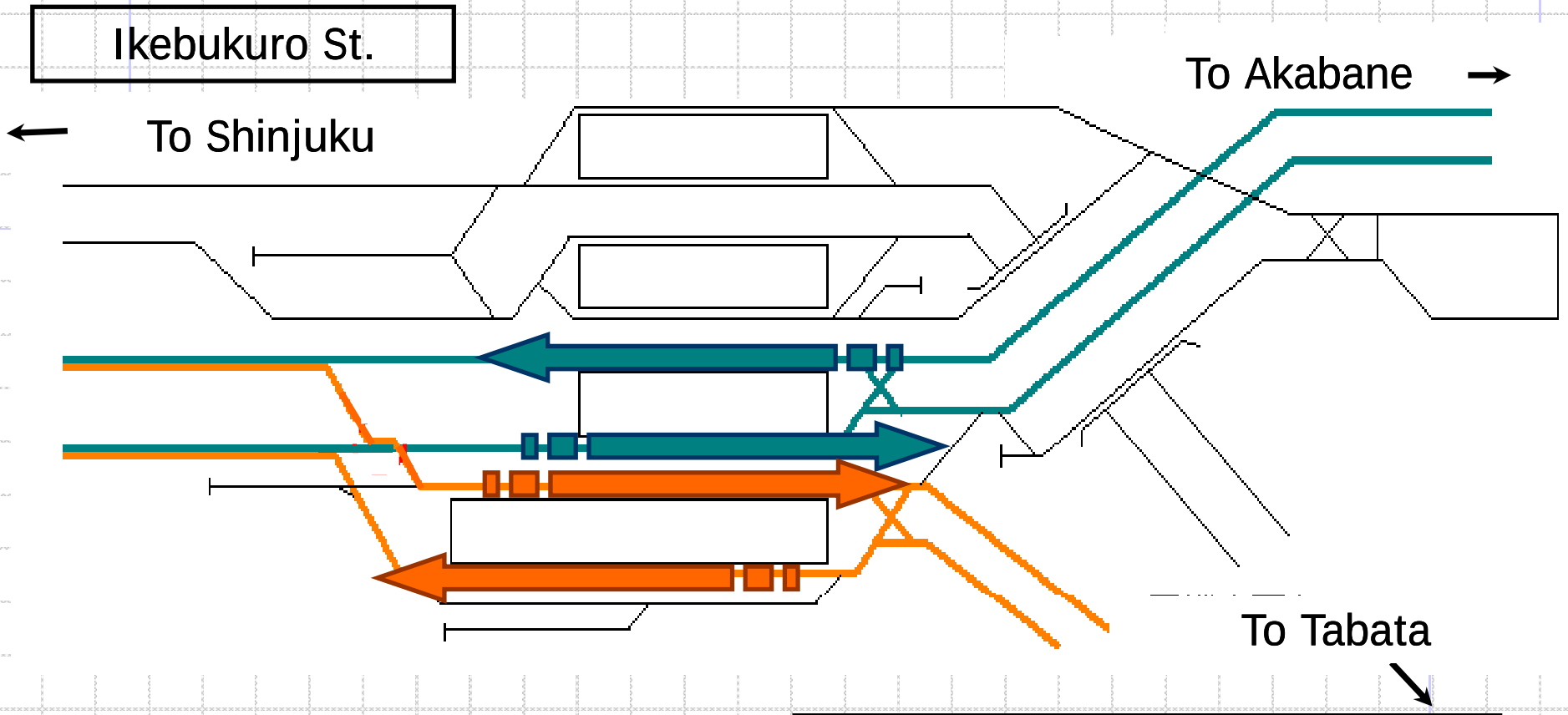
—Structure of “through routes”—



Transportation Friendly to People and the Environment

Promoting Seamless Transportation

— Improved Transport Convenience —



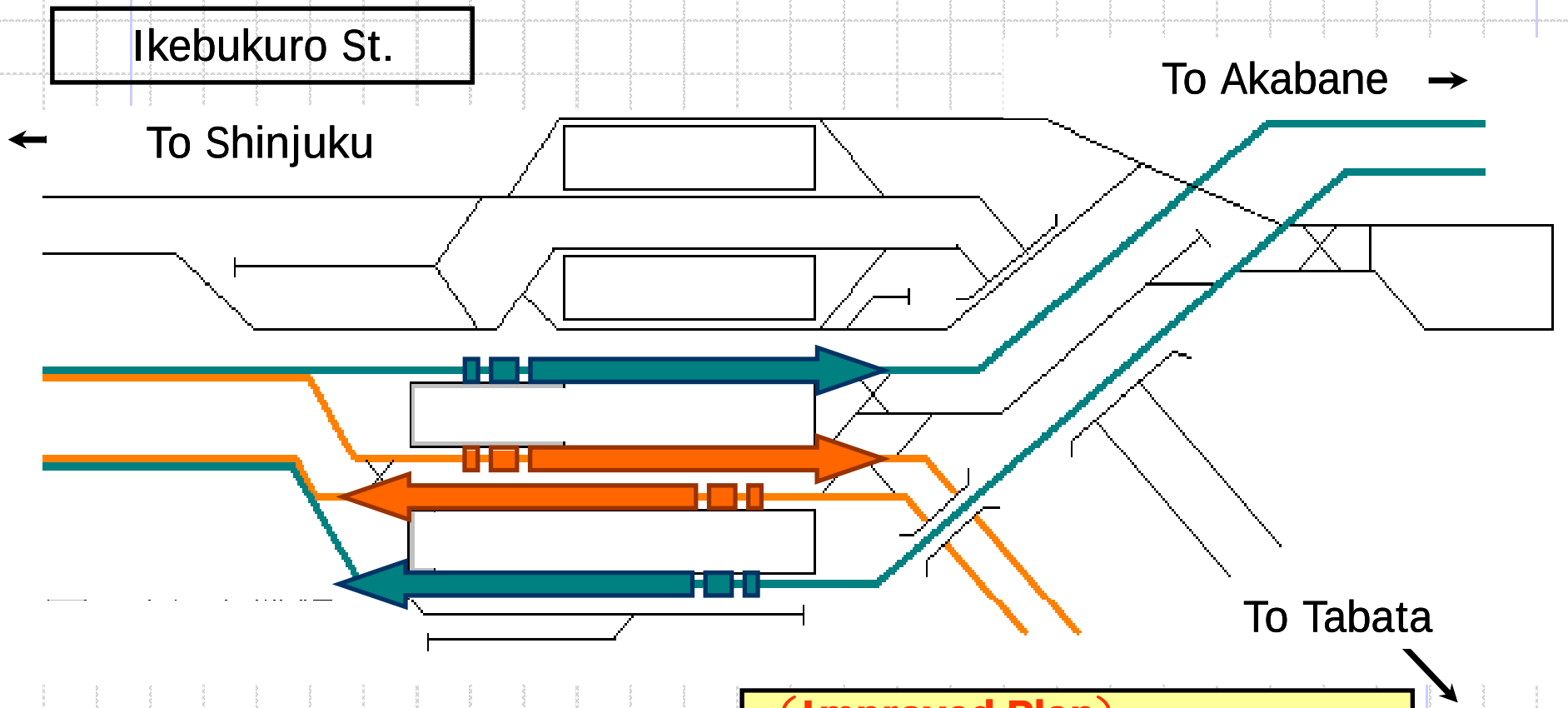
（Previous Plan）

Platforms were arranged by Line

Transportation Friendly to People and the Environment

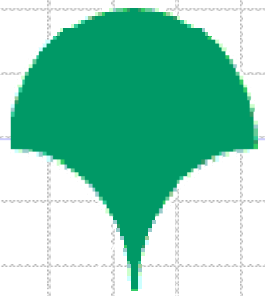
Promoting Seamless Transportation

— Improved Transport Convenience —



（Improved Plan）

Platforms were arranged by Direction of Trains



Tokyo Metropolitan Government

Thank you very much!