

Japan-Myanmar Seminar for Urban  
Development and Housing 2017  
Keynote Speech

# Japan's Cooperation for Urban Development in Myanmar

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Special Advisor to the  
Prime Minister  
Dr. Hiroto IZUMI

January 31, 2017

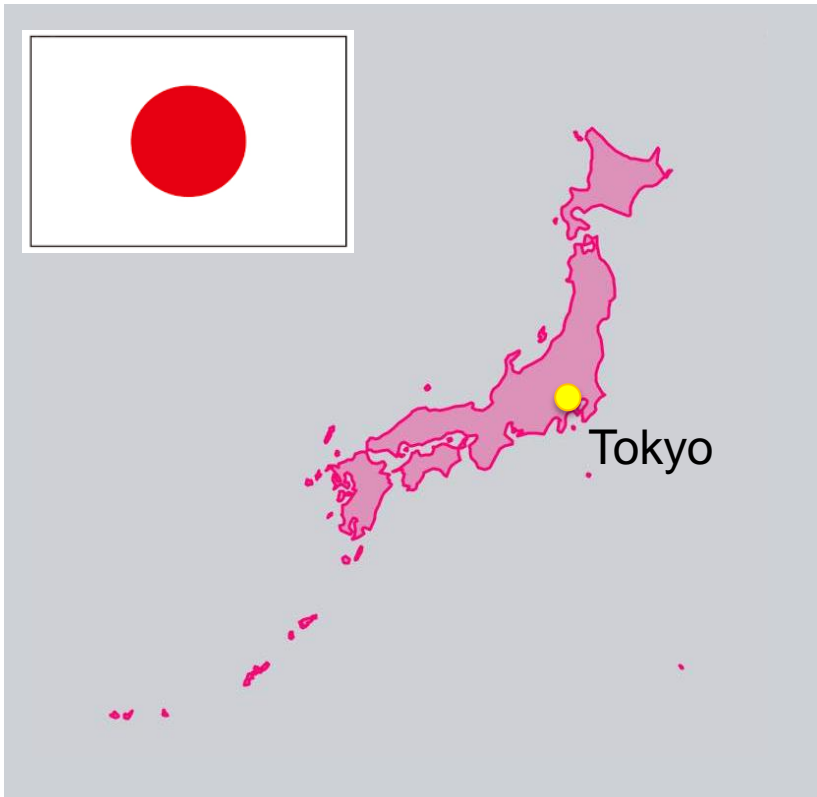
1. Comparison of Myanmar and Japan
2. Urban issues in Myanmar
3. Urban issues and responsive actions experienced by Japan
4. Overseas deployment of infrastructure systems by the Japanese government

1. **Comparison of Myanmar and Japan**
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# Outline

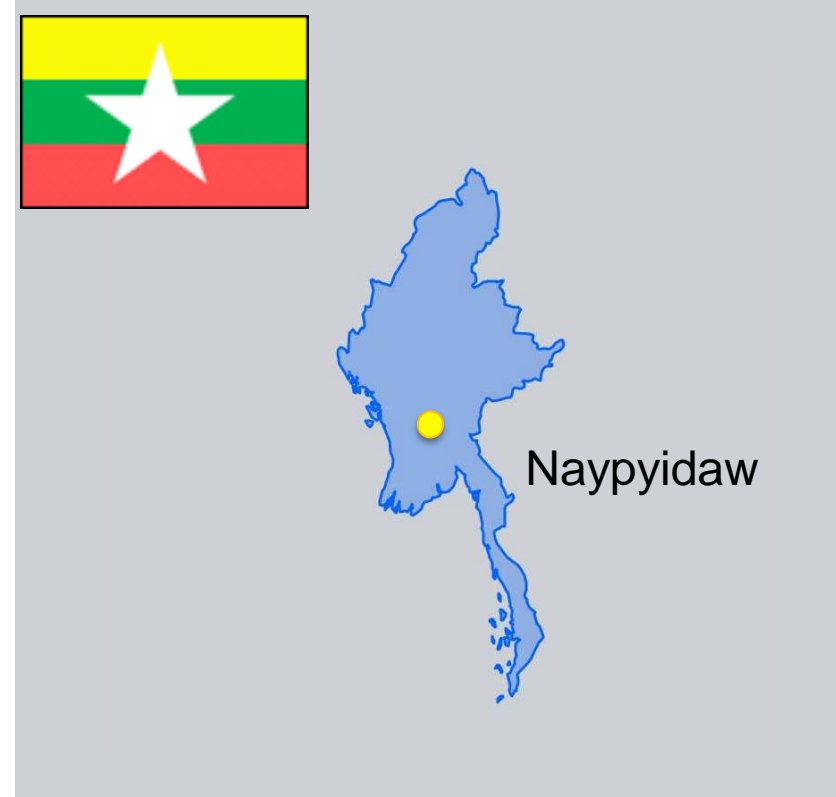
## ■ Japan

Population	About 127 million
National land area	About 378,000 km <sup>2</sup>
GDP growth rate	0.5%

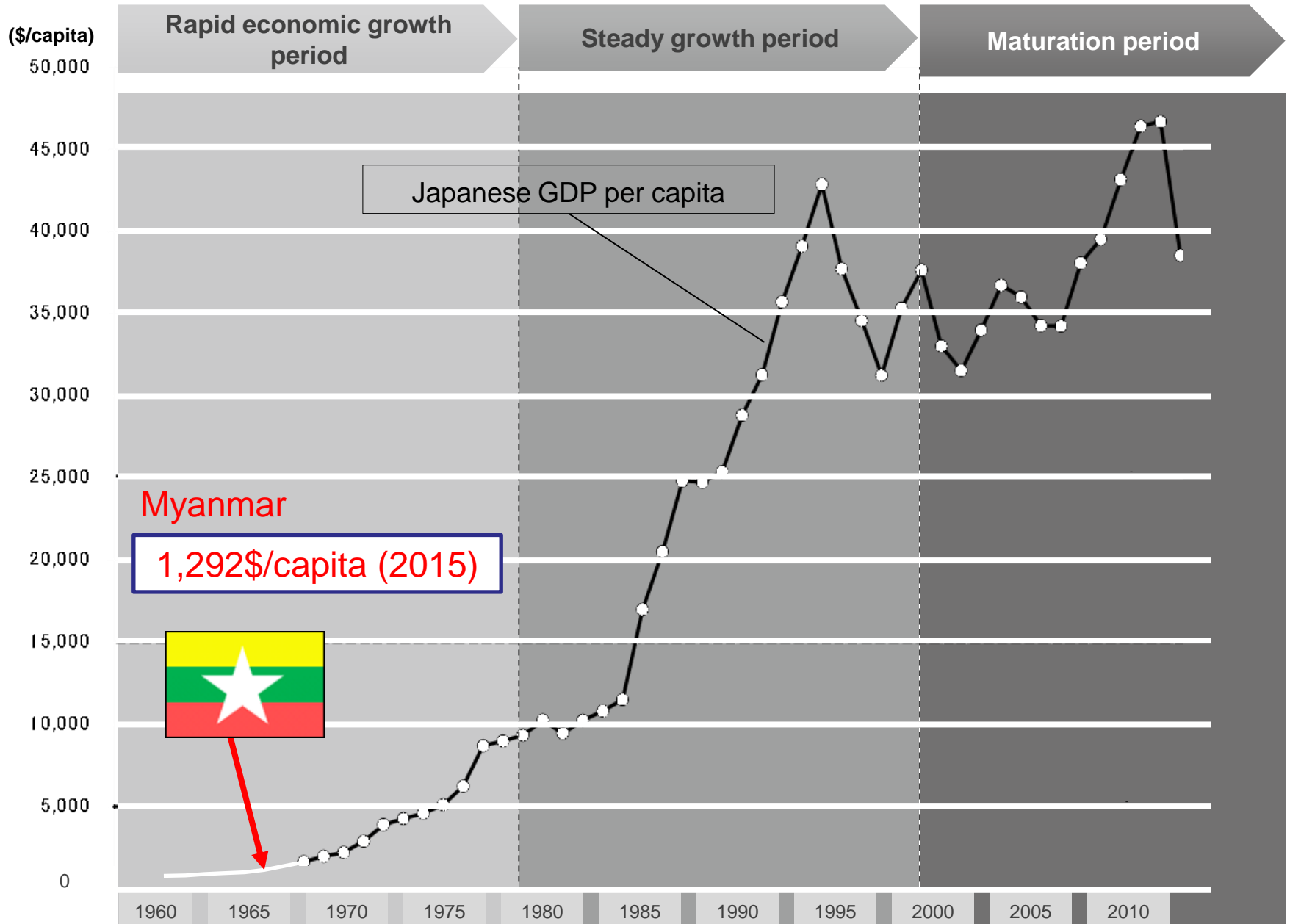


## ■ Myanmar

Population	About 51 million
National land area	About 680,000 km <sup>2</sup>
GDP growth rate	7%



# Changes in GDP per capita



# Comparison of Yangon and "Yamanote Line"

Scale  $\doteq$  Yamanote Line Tokyo

Population  $\doteq$  5mil.  
(estimated to be 10mil in 2040)

	Area (km <sup>2</sup> )	Population	Density (/ha)
Tokyo	2,190.9	13,378,584	61
23ward	622.99	9,214,130	148
Yangon	598.8	5,210,000	87



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# Major Concern in Yangon city

The short review conducted by JICA in March 2016 concerning the urban development / transport master plan indicated some issues for Yangon, including "securing of housing in response to population growth", "establishment of a planned urban development system", "conservation and revitalization of historical values", and "aggravation of traffic congestion."

## [Course of events in the urban development MP and urban transport MP]

SUDP (Sustainable Urban Development Plan) and YUTRA (Yangon Urban Transport Plan) completed by 2014



Changes in Rapid Urbanization

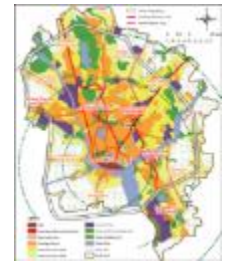
Short Review conducted in March 2016

- Quick Assessment by Experts
- Findings of Bottlenecks and Potentials



Based on Quick Assessment and Findings

“Upgrade of Yangon Urban Development & Urban Transport Master Plan” (Jun - Dec 2016)



## [Major Concern in Yangon city]

- Accommodation of increase population (6.1 million by 2040)
- Appropriate control system of urban development projects
- Renovation and utilization of heritage value
- Investment and management of infrastructure
- Growing traffic congestions, accidents air pollution and decrease in public transport services due to rapid increase in private vehicles (10%/year) and slow progress of infrastructure provision and management improvement.



Cooperation works closely with MLIT Working Group discussion for urgent actions of traffic congestion

## Main Concepts for Upgrade of the Master Plans

**The Peaceful and Beloved Yangon “ A City of Green, Water, & Gold - Livable Yangon ”**

**People centered with Comfortable Living Environment and Efficient Transportation System**

**International Logistics & Port City utilizing Inland Water Network**

(Engagement with Wider Public Involvement and Consensus Building Process with Myanmar Side)

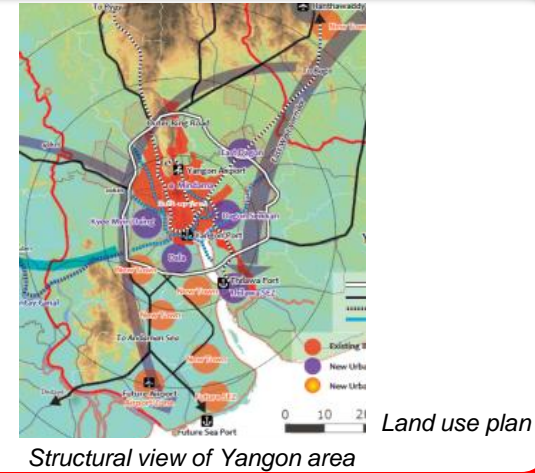


# Key Output of Urban Development

## 1. Space plan proposal

### Main points

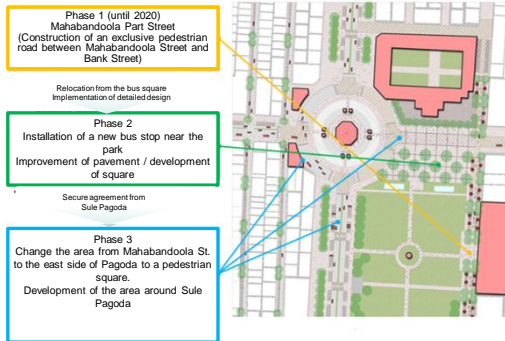
- Development strategy considering the enhancement of international city and logistics hub functions in Yangon region development
- Proposal for formation of good landscape using historical buildings (Sule Pagoda area, CDB, waterfront area, etc.)
- Proposal for transit oriented development (TOD) and development of the area in front of the station in cooperation with YUTRA
- Resubmitted proposal for land use, zoning, and capacity
- Proposal of the development plan for three new urban areas
- Infrastructure improvement plan linked to urban development
- Suggested as future projects the development of Western Yangon area (Kyimyindaing area), Southwest area, new airport, and new harbor.



## 2. Proposal for formation of good landscape using historical buildings



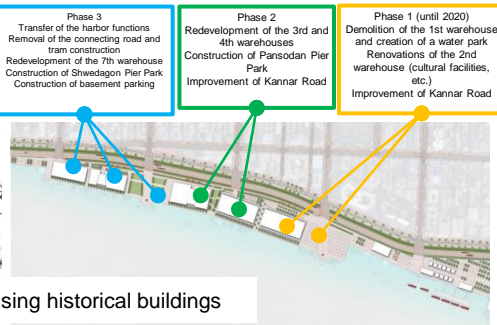
Creation of urban square open to citizens centering on Sule Pagoda



**Sule Pagoda area**



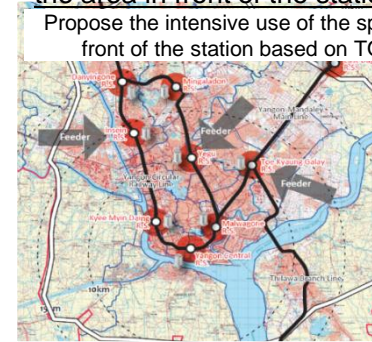
Creation of an attractive waterside space using historical buildings



**Waterfront area**

## 3. Proposal for transit oriented development (TOD) and development of the area in front of the station in cooperation with YUTRA

Propose the intensive use of the space in front of the station based on TOD.



Proposal for transit oriented development (TOD) of the Yangon Loop Line and development of the area in front of the station

## 4. Infrastructure improvement plan linked to urban development

Infrastructure development to strengthen the resistance against urban disasters



Proposal of the rainwater drainage improvement project for CBD area

# Priority Project (Urban development)

As the result of examination in JICA, it was proposed to start 41 major projects by 2020, including "Governmental land redevelopment" and "Financing low-cost urban housing," in order to realize the development vision and urban structure indicated by the urban development master plan.



## Governmental Lands Redevelopment Project

### Project Scope

- Making a area development plan, and the implementation scheme

### Responsible Organization

- MOC and the other organization which own developable lands in Yangon



## Financing Low-cost Urban Housing Program

### Project Scope

- Establish of a revolving fund for long-term housing loans at low interest rates under CHDB.
- Capital injection to CHDB in a form of "Two-Step Loan" financed by concessional loans in order to provide housing loans

### Responsible Organization

- CHDB



## Yangon Heritage Strategy Implementation Project

### Project Scope

- Implementation of Yangon Heritage Strategy Action Plans

### Responsible Organization

- YCDC and YHT

# Key Output of Urban Transport Development

- (1) Clear the bottleneck in major trunk roads and central urban area  
: Develop inner and outer ring roads / Improve the bottleneck in major trunk road, etc.
- (2) Bus service modernization  
: Review the bus line network / Realignment of bus companies / Renewal the vehicles / ICT Introduction, etc.
- (3) Improvement of traffic control / safety  
: Improve the vehicle registration system / Improve the automobile inspection system / develop measures to control on-the-road parking and parking lots, etc.
- (4) Solution to the missing link  
: Road network development plan based on transport demand forecast / Strengthen the road network, etc.
- (5) Development of urban railway network  
: Circular railway improvement / New urban railway / Passenger service improvement, etc.
- (6) BRT development  
: Transport demand forecast / Proposal of the priority BRT route based on review of the bus line network, etc.
- (7) Water transportation development  
: Water transportation lines for access to central urban area and freight transport / freight transport, etc.
- (8) Promotion of TOD development  
: Promotion of TOD type development investment (PPP) / Conduct of field survey for integrated development of the areas in front of and around the station, etc.
- (9) Reinforcement of the Yangon Region Transport Authority (YRTA)  
: Strengthen the functions and organization system and develop human resources



Proposal of inner ring road



Integrated development of the areas in front of and around the station



Image of water bus

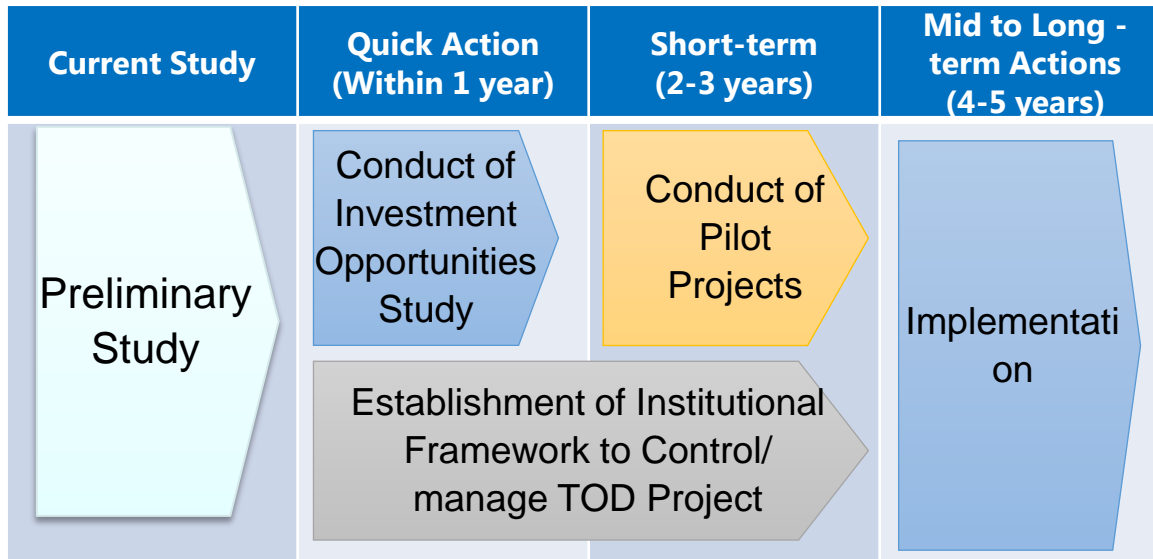
# Strategic Action Plan (Urban Transportation)

Each Strategic Action Plan provides "Objectives", "Roadmap", "Components", etc.

## [Example of Strategic Action (TOD)]

■ **Objectives** : to promote transit –based compact urban area, local economic development and value capture

### ■ Roadmap



### ■ Project Components

- **TOD on Circular Rail**
  - Integrated Urban Development at/around the Stations
  - Improvement of Access to/from the Stations, especially, in the area within walking distance
  - Development of Integrated New Town for Resettlement and those who need Affordable Housing
  - Effective Use of the Space under the Viaduct
  - Integrated Development of Publicly Owned Lands
- **TOD on Other Lines**
  - Integrated Development with Suburban Centres
  - Development of Underground Space at Metro Stations

# MP formulation in 3 local cities (Mandalay, Patheingyi, Mawlamyine)

JICA is supporting the formulation of an urban development project master plan for the three cities important as the core of development in Myanmar in order to show future pictures and conduct comprehensive development for them.

## ■ Mandalay: Proposed "20" priority projects.

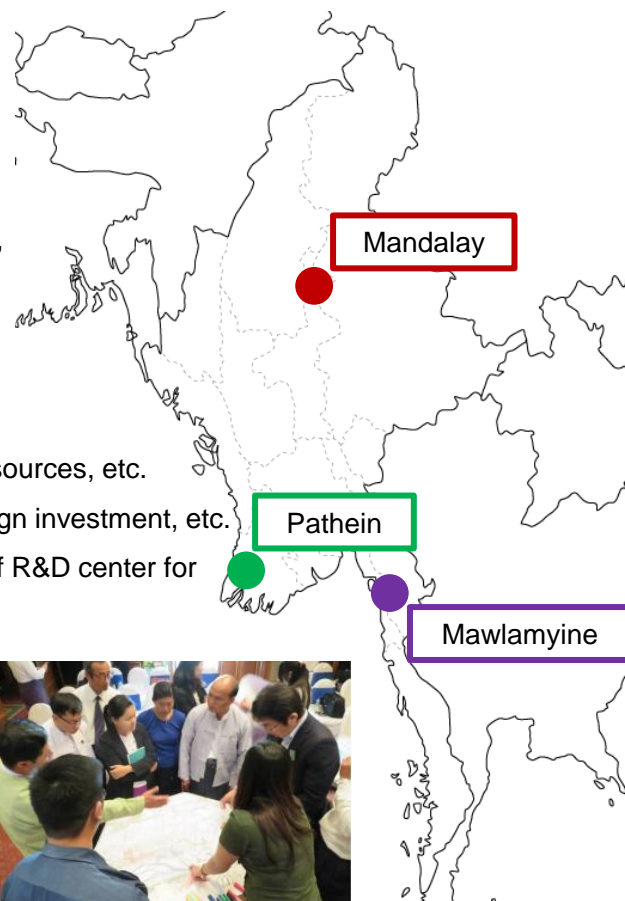
- Logistics center: Improvement of traffic cooperation, establishment of industrial zone and logistics center, invitation of foreign investment, etc.
- High technology / education: Creation of added value, cooperation with higher education institutions, etc.
- Culture / tourism: Formation of landscape, formation of continuous scenic route, etc.
- Disaster prevention / greening: Planned consideration in development, nature conservation, etc.

## ■ Patheingyi: Proposed "13" priority projects.

- Tourism hub: Realignment of tourist city function, utilization of tourism resources, etc.
- Logistics hub: Improvement of access to industrial zone, invitation of foreign investment, etc.
- Agriculture / green: Promotion of high-value-added agriculture, establishment of R&D center for modern agriculture

## ■ Mawlamyine: Proposed "13" priority projects.

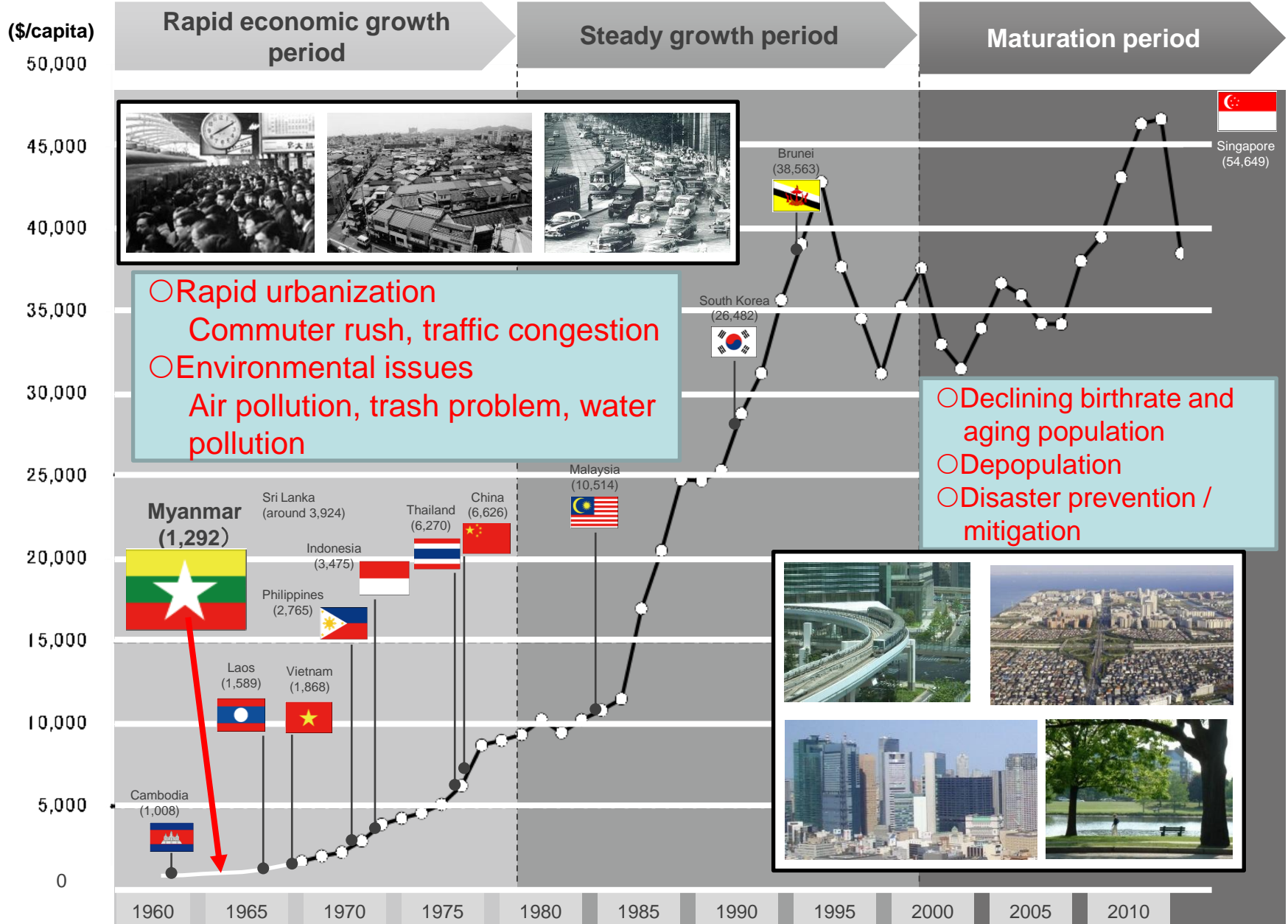
- Heritage tourism: Utilization of tourism resources, space improvement in city center, etc.
- Connectivity / industry: Center function reinforcement in transport nodes, major industries, etc.
- Comfortable living environment: Improvement of city life environment, invitation of industrial / commercial investment, etc.



First Workshop in Mandalay

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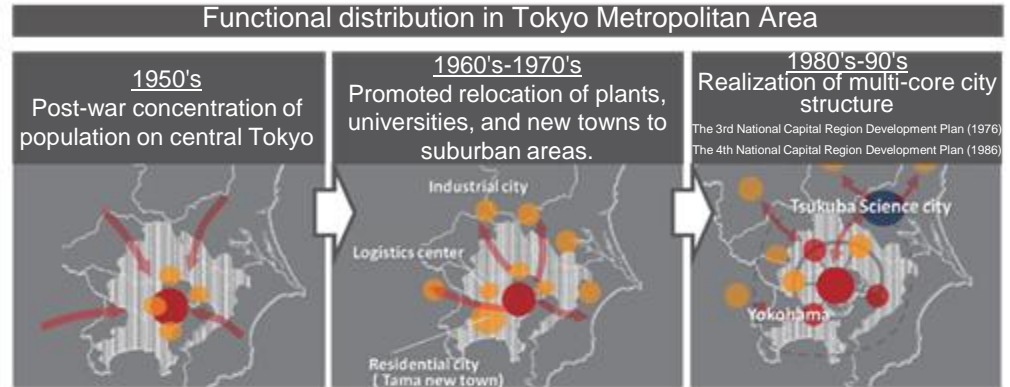
# Urban Issues Faced by Japan



# Japan's Experiences in Urban Development

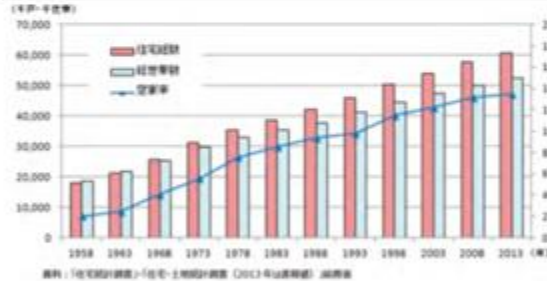
Rapid economic growth period

1.  
Decentralization of  
urban function



2.  
Provision of a large  
amount of residences

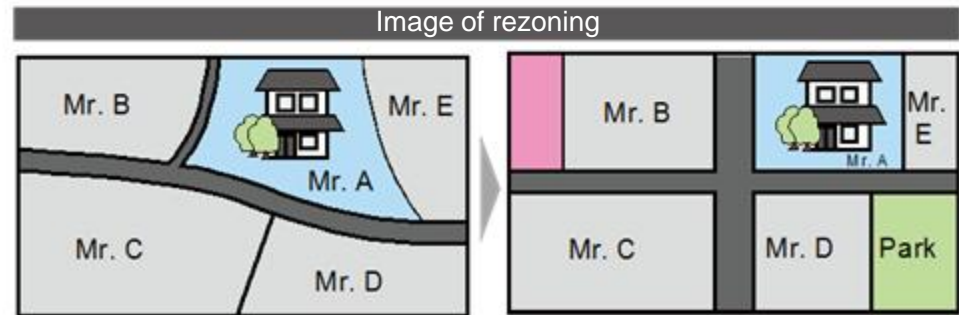
Trends of the numbers of dwelling units and households, and vacancy rates



Three housing policies

- Establish the organization and system for housing loans.  
→ Foundation of Housing Loan Corporation (1950) (present Japan Housing Finance Agency)
- Establish a legal system for development of public rental housing  
→ Proclamation of the Publicly-operated Housing Act (1951)
- Establishment of public corporations and development of public housing (new towns)  
→ Foundation of Japan Housing Corporation (1950) (present Urban Renaissance Agency)

3.  
Legal system development for  
materializing the urban policies





# Japan's Experiences in Urban Development

Steady growth period

4.

## Improvement of housing performance level

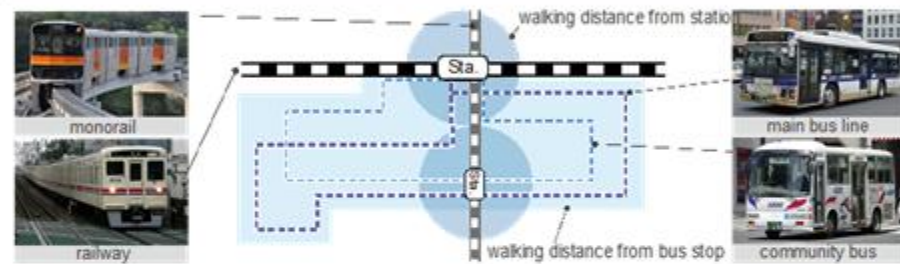
Improvement of the peripheral / indoor environment of housing



5.

## Enhancement of public transportation

Introduction of various transportation systems



6.

## Development of Brown Fields

Redevelopment of harbor districts (ex. Harumi)



7.

## Effort for resource

Introduction of resource recycling equipment (ex. Roppongi Hills)



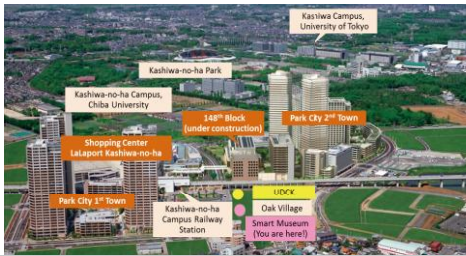
# Japan's Experiences in Urban Development

## Maturation period

8.

### Implementation of a Smart City

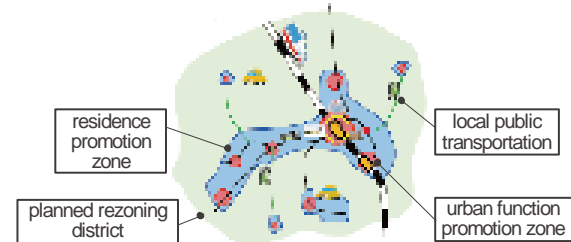
Smart city realization in Kashiwa-no-ha Campus City



9.

### Town development for compact city + network

Realization of compact city structure



10.

### Revitalization of the housing stock

Renovated housing stock



11.

### Landscape protection

Landscaping by removing utility poles, decorating the pavements, etc.



# Tama New Town

- Urban development by public government.
- New construction of two radial private railways with direct connection to central Tokyo
- New construction of a loop of Tama Intercity Monorail with connection to Tachikawa City

## Development of Tama New Town

Urban railway



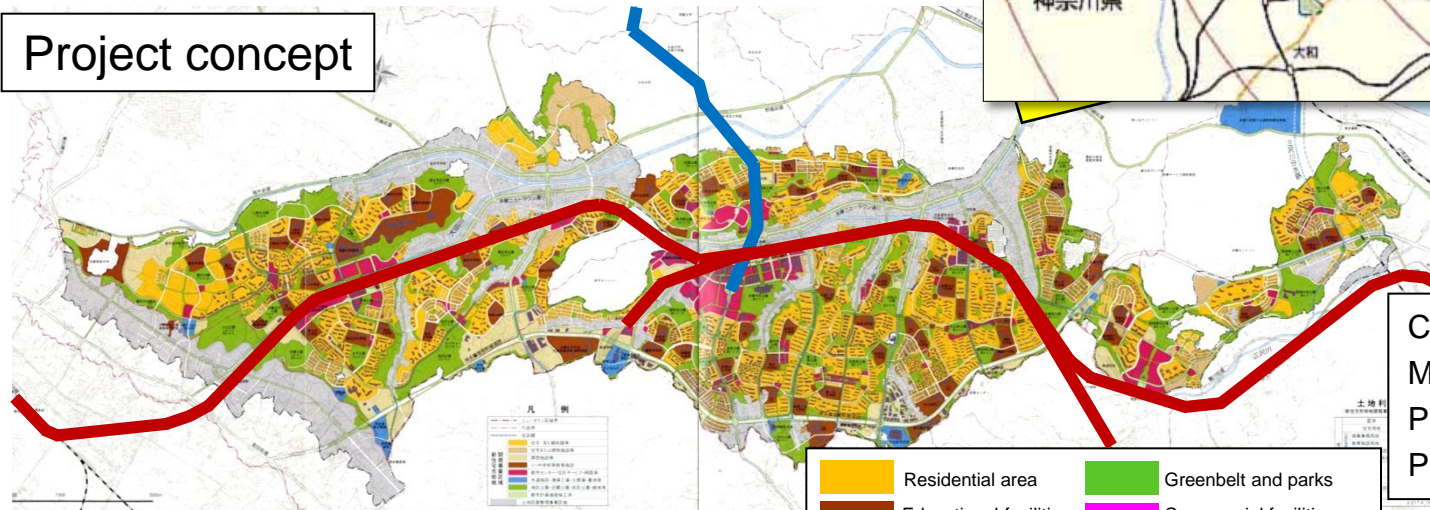
Monorail



Location map



Project concept



Source: Materials submitted by UR

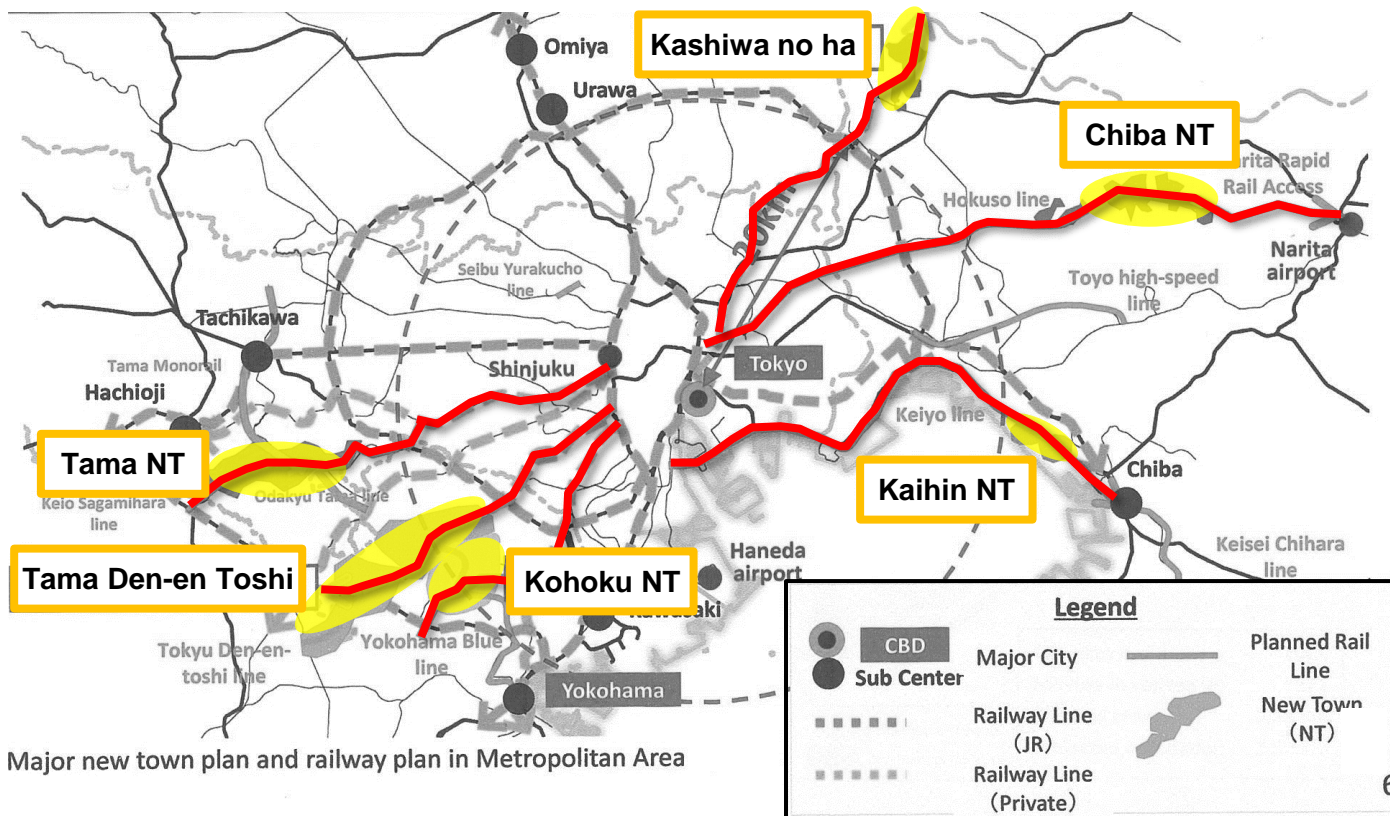
Source: City and Transportation,  
Vol. No. 65  
(Japan Transportation  
Planning Association)

City plan decided : 1965  
Moving-in started in : 1971  
Planned area : 2,892ha  
Projected population: 340,000

- Residential area
- Educational facilities
- Greenbelt and parks
- Commercial facilities

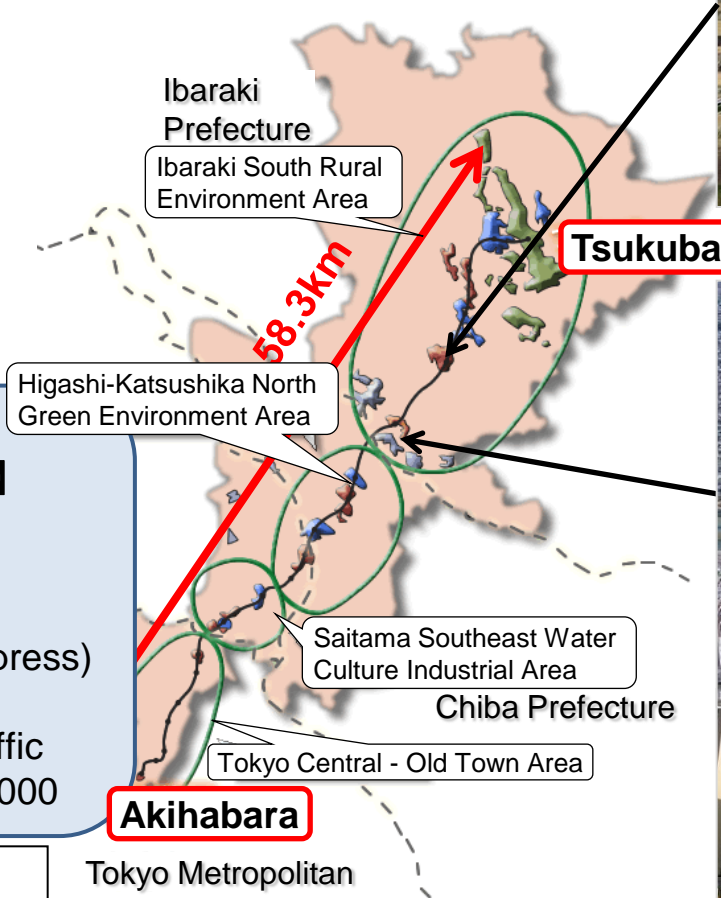
# Enhancement of public transportation

- Induction of new town development in Tokyo Metropolitan Area -  
 In conjunction with urban railway development, a large-scale suburban new town development was conducted, such as Tama NT, Tama Den-en Toshi, Chiba NT, Kohoku NT, Kaihin NT, and Kashiwa no Ha. (Transit Oriented Urban Development)



# Tsukuba Express

Integration of urban development along railway and urban railway development : Tsukuba Express



## 【Metropolitan Intercity Railway Company】

- Start of Operation: Aug. 2005
- Operating Distance: 58.3km
- Line Name: Joban New Line (Tsukuba Express)
- Number of Stations: 20
- Average Daily Passenger Traffic Approximately 320,000

## 【Urban Development along Railway】

- Start of Project : 1993
- Planned area : 3,000ha
- Projected population : 250,000

## ● Establishment of the three pillars of housing policies

### Housing Loan Corporation (established in 1950)

Promote the purchase / construction of housing by lending long-term low-interest funds.

### Publicly-operated housing (legislated in 1951)

Supply rental housing with low rent to low-income earners who are unable to meet their housing needs.

### Japan Housing Corporation (established in 1955)

Construct housing and supply housing land in a massive scale centering on metropolitan areas.

→ Reorganized to "Housing and Urban Development Corporation" in 1981,

"Urban Development Corporation" in 1999, and

Independent Administrative Institution "Urban Renaissance Agency" in 2004.

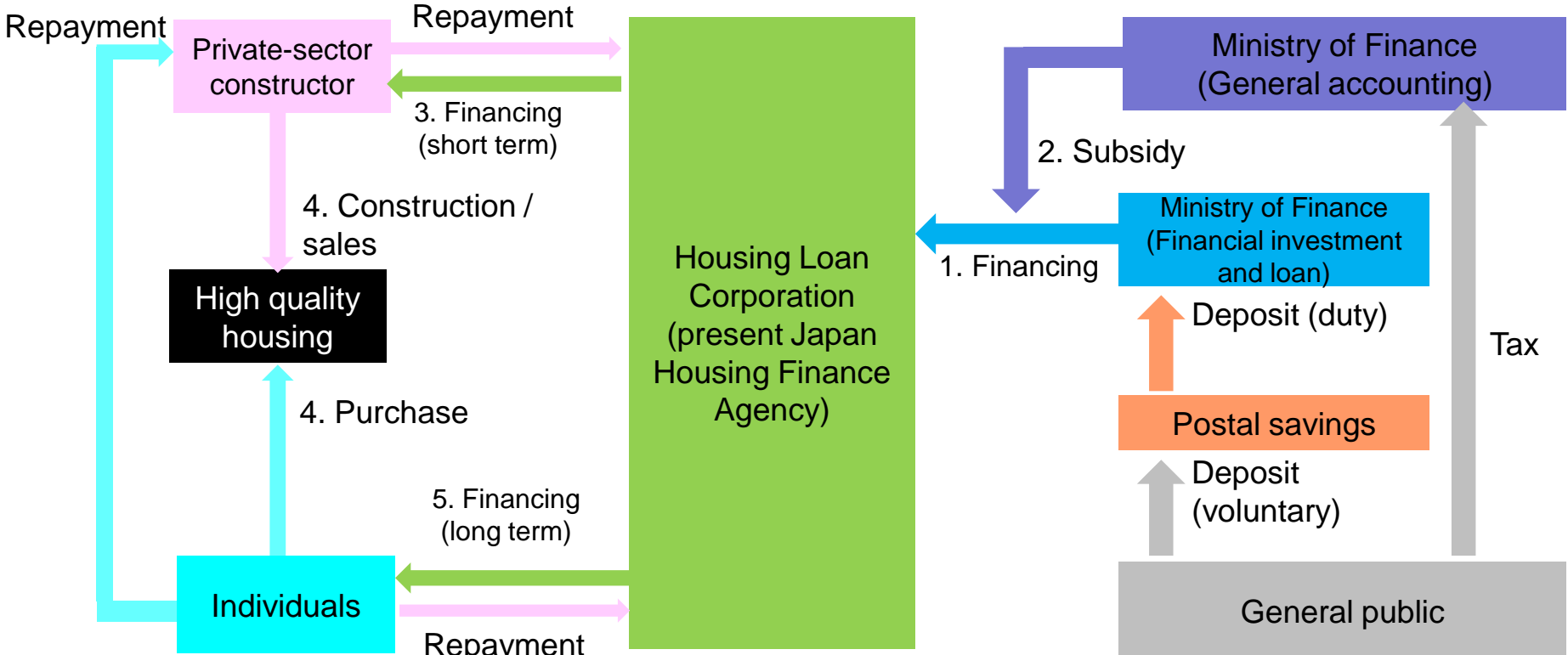
5 2 - 4 R R S - 1 - 2 D K<sub>i</sub> - G - 41.6 m<sup>2</sup>  
51CN type



Example of public housing (2DK type)

# Housing Loan System of Japan (1) Loan Scheme of Housing Loan Corporation (until 2007)

1. Housing Loan Corporation provided housing loans directly to individuals at a long-term fixed interest rate with the funds borrowed from the Ministry of Finance (financial investment and loan).
2. Interest of loans by Housing Loan Corporation was supplemented by subsidy from the government and was therefore kept low.
3. Housing Loan Corporation also provided private-sector constructors with short-term funds for housing construction.
4. Private-sector constructors sold housing to individuals.
5. Housing Loan Corporation directly lent funds to individuals who purchase housing.



\* From 1950 to 2007 (as shown in the Figure)

- Housing Loan Corporation provided housing loans directly to individuals at a long-term fixed interest rate.
- As funds for housing loans, funds collected by the Ministry of Finance from postal savings (deposits from citizens), etc. were used.

This scheme shifted as follows in 2007 in accordance with the development of the money market.

- Private financial institutions provide housing loans (Japan Housing Finance Agency no longer directly provides loans).
- Japan Housing Finance Agency purchases housing loans from private financial institutions, securitizes them to mortgage-backed securities (MBS), and sells MBS in the money market.

(Loan funds needed by private financial institution are procured from the capital market through securitization by Japan Housing Finance Agency)

## General flow of the technical review on housing loans by Housing Loan Corporation (for newly-constructed single-family houses)

**Apply for housing loan**

### **Design review**

Confirm whether the construction work described in the application conforms to the technical standards of Housing Loan Corporation by checking the drawings and specifications (plan view, elevational view, specifications, etc.).



**Start of construction**

### **On-site review (when roofing work is completed) \***

In principle, when roofing work is completed, technical staff visit the construction site to check whether the construction work described in the application conforms to the technical standards of Housing Loan Corporation.



**Issuance of the notice concerning the on-site review**

**Receipt of loan**

\* On-site review upon completion of construction work has been added since October 2001.



# 1960's: Stipulation of Housing Construction Plan by law and massive supply of public housing

1955: Housing Construction 10-Year Program "Solution of the shortage of 2.72 million housing units.

Supply of 250,000 housing units every year"



1957: New Housing Construction 5-Year Program



1964: Housing Construction 7-Year Program



Establishment of the Housing Construction Planning Act (1966)



1st Term Housing Construction 5-Year Program  
(1966-1970)

"Realization of one housing unit for one household"



Soka Matsubara Danchi (housing complex)

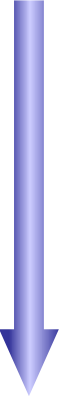
Supplied 2.6 million public housing units during the term.

# 1970's: Shift from Quantity to Quality

Total number of housing units exceeds total number of households in the country (1968).

Total number of housing units exceeds total number of households in all the prefectures (1973).

2nd Term Housing Construction 5-Year Program (1971-1975)

- 
- Aim to live in a housing unit with habitable rooms totaling 9 tatami mats for small households or at least 12 tatami mats according to the number of household members for general households.
  - Aim to construct "a housing unit with a size satisfying one room for every person."

3rd Term Housing Construction 5-Year Program (1976-1980)

Minimum housing standard

- Housing standard for all the public to secure
- Reduce by about half the households living under the standard by 1980.

Average housing standard

- Housing standard for average household to secure
- Aim to ensure that average household secures the standard by 1985.



Tama New Town  
(Move-in started in 1971)

# Minato Mirai (Yokohama)

Development taking advantage of the waterfront characteristics and considering the conservation of historic properties and port landscape. Develop an attractive city where urban functions and operating functions of enterprises and administrative organs are brought together as a center of international exchange.

1980



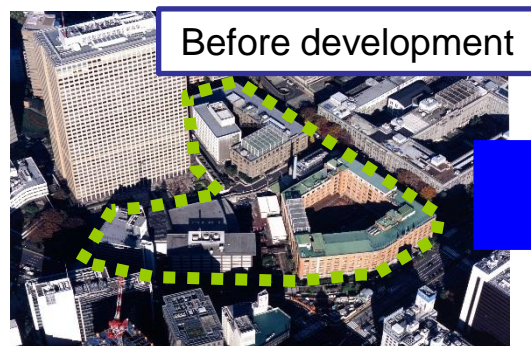
Yokohama Red Brick Warehouse

2016

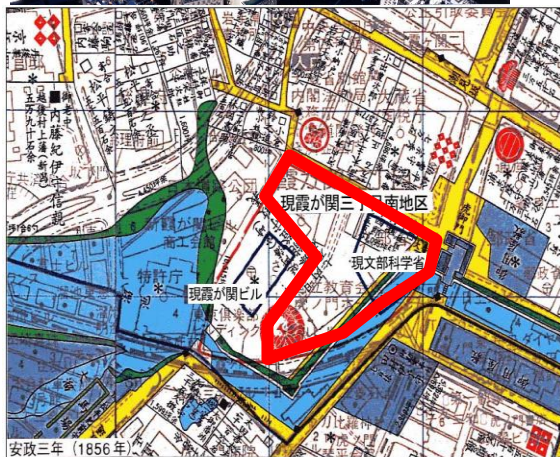


# Kasumigaseki Common Gate

Redevelopment as the first PFI (Private Finance Initiative) project in Japan utilizing government land (government offices). Realized community development utilizing the characteristics of historical area and highly effective use of land by reducing the limit of floor area ratio.

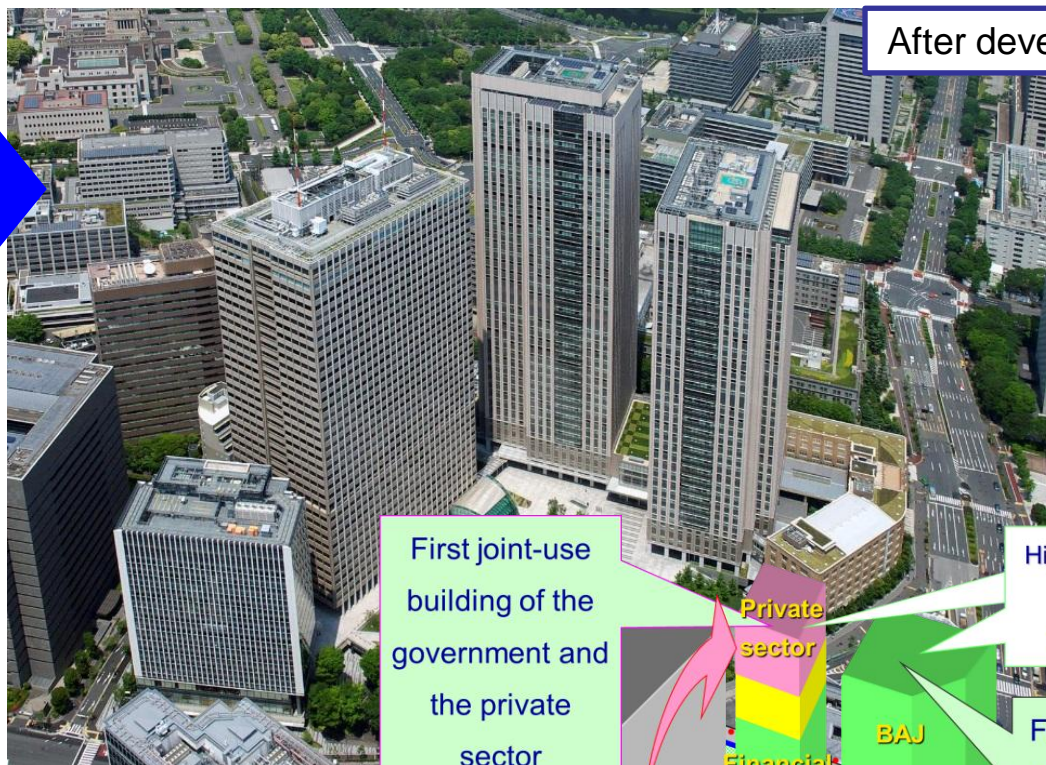


Before development



Map of the Edo Era

Stone walls of Edo Castle preserved in the premises



After development

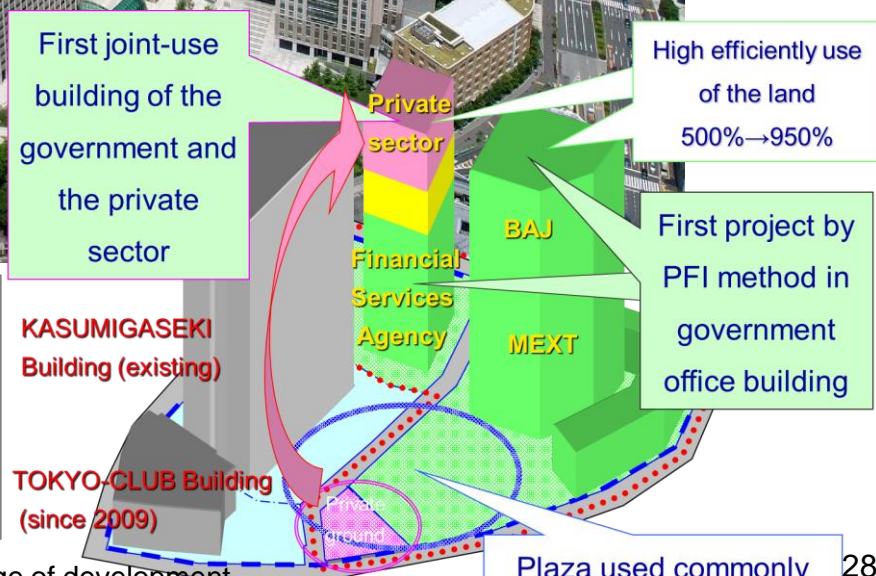


Image of development

# Actions for Landscape Formation (1) Economic Growth and Deterioration of Landscape

Despite the continuing high growth of economy, actions for landscape formation are likely to be behind and deterioration of landscape increased in many locations. Although some advanced local governments promoted their actions through establishment of independent ordinances for landscape protection, enforceability of such ordinances was limited since they were not based on any national law.

<Example of interference with good landscape>



Overflow of illegal advertisements



Many wires in the air

Very low ratio of underground cables as compared with major foreign cities

London and Paris:	100%	} as of 1977 as of March 2003
Berlin:	99.2%	
New York:	72.1%	
Tokyo 23 Wards:	<u>5.2%</u>	



Construction of buildings inappropriate for the landscape

Condominium development impaired the landscape of Byodo-in Phoenix Hall (national treasure and world heritage)

# (2) Establishment of Landscape Law

Landscape Law, established in 2004, supports activities of local governments for formation of good landscape.

[Activities under the Landscape Law]

Local government that promotes landscape administration utilizing the Landscape Law = Landscape Administration Body **681 bodies**

Status of utilization as of Municipalities March 2016

Landscape plan (system for notification, recommendation, etc.) **523 bodies**

Landscape area (City planning control system) Limitation on buildings etc.

1. Limitation on buildings etc.

**(1) Limitation on form / design** (form, color, quality of material, etc.)

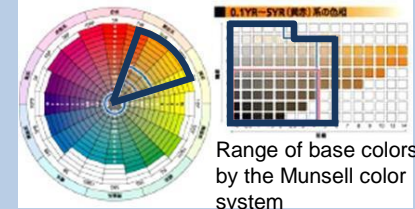
<Image>

Inclined roof covered by smoked tiles

Japanese-style walls



The exterior walls have a tint of warm color or achromatic color for harmonization with the surrounding area.



Range of base colors by the Munsell color system

**(2) Height, wall surface position, etc.**

Leading by notification system. (Possible to recommend design change, etc. if not conforming to the standards)

For form / design, it is also possible to give an order when applicable actions are designated by ordinance.

Ensure effectiveness by certification system.

Ensure effectiveness by building confirmation etc.

2. Other planning matters

\* Regulation corresponding to "a Quasi-Landscape District" is also possible for areas other than city planning area.

Structures / trees of landscape importance

Promoting landscape preservation by designing structures etc. important for the landscape (permission system for change of existing state)



In addition, promoting the comprehensive formation of good landscape by implementation of the landscape agreement for public facility of landscape importance and other systems.



# (3) Establishment of the Historic Community Development Act (\*)

\* Act on Maintenance and Improvement of Traditional Scenery in Certain Districts

Historic Community Development Act was established in 2008 to maintain and improve buildings with a high historical value and surrounding area.

The central government actively supports the activities of local communities

- To develop the vision of "administration of ancient city preservation" throughout the country, mainly for urban areas, and
- To promote community development for maintenance and improvement of historic scenery

[Historic scenery]

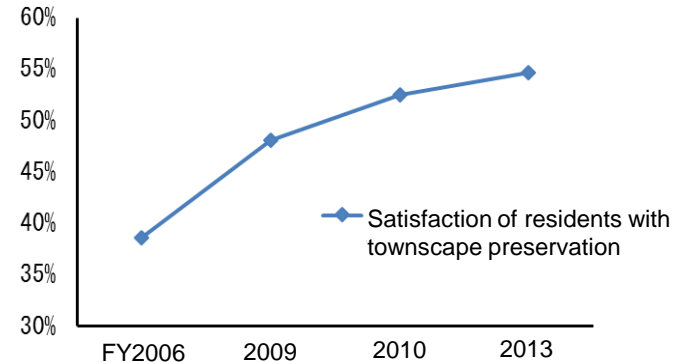
"People's activity" reflecting the history and tradition unique to the region = People's life

"Buildings with a high historical value and surrounding area" where such activity is performed.

Good environment of urban area developed in harmony with the historic scenery.



- The Ministry of Land, Infrastructure, Transport and Tourism and the Agency for Cultural Affairs, and the Ministry of Agriculture, Forestry, and Fishery have so far authorized projects of 59 cities.



**Intensive support by each project**

**Results of resident questionnaire (Kameyama-shi, Mie)**

## (4) Examples of Landscaping

- Landscaping by removing utility poles, decorating the pavements, etc. (Matsuyama-shi, Ehime)



- Repair and landscaping project for historic scenery buildings (Ikaruga-cho, Nara)





# (5) Holding of Public Awareness Raising Event

In the course of studying / planning revitalization of the central urban area of Yangon, "Pedestrian paradise" was held as a pilot event from the evening to night. The purpose of this event was that citizens experience the importance of landscape preservation and attractive urban development in future.

## Opening Ceremony

- Opening address from Yangon Region Chief Minister Phyo Min Thein, Ambassador Higuchi, Yangon Mayor, and Office Manager Nakazawa
- Messages focused on urban development for new Yangon were issued to many citizens and tourists who joined the event.



Place of opening ceremony

## State of the event

- The event was held on two streets facing the park in the central urban area, along which stands selling local traditional products or providing foods were open. Also, entertainment performance was held on the streets, where many citizens and foreign tourists were walking, enjoying stands and performance.
- It was a practical event and Region Chief Minister Phyo Min Thein commented that he hopes to have such an event every year.



Region Chief Minister Phyo Min Thein  
He said loudly to citizens, "Feel the charm of Yangon and make a new Yangon together!!"



Ambassador Higuchi  
"I really realized this is a wonderful event and want to cooperate with you in revitalization of Yangon!!"



Office Manager Nakazawa  
"For revitalization of Yangon, your participation is important. Your feedback as well as your participation in the event is greatly expected!!"



Drones also played an active part.

## State of the event



Panel of State Counsellor Suu Kyi  
This event was also held in commemoration of the 25th anniversary of the receipt of Nobel Peace Prize.  
(Proposal of Region Chief Minister Phyo Min Thein)

## State of stands



A traditional umbrella store in Patheingyi

# Improvement of Earthquake Resistant Performance of Existing Buildings

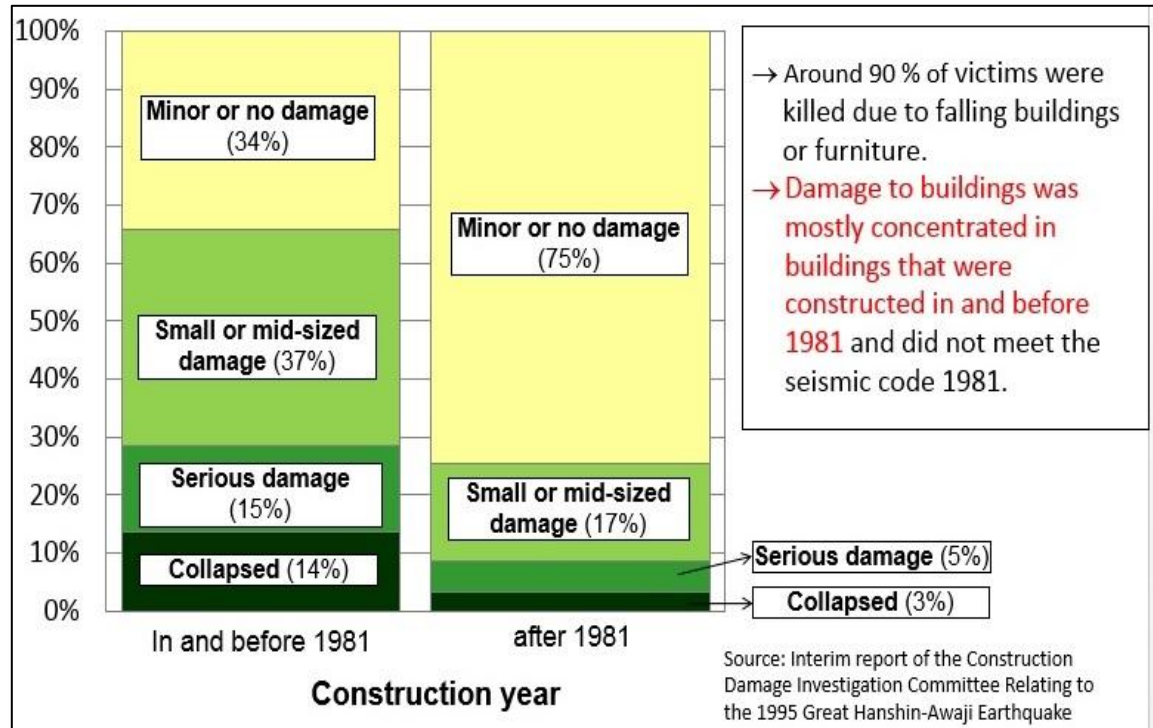
## [Major events]

- 1950 Enactment of The Building Standard Law (BSL)
- 1981 **Wide amendment of seismic code**
- 1995 Great Hanshin-Awaji Earthquake  
Enactment of **The Act of Promotion of Seismic Retrofitting of Buildings (APSRB)**
- 2011 Great East Japan Earthquake  
Amendment of APSRB  
(Mandatory seismic assessment of Large scaled hospitals, department stores, hotels, schools, etc.)

## [Examples of seismic retrofitting]

Source; Japan Building Disaster Prevention Association

Comparison of the damages of buildings in Great Hanshin-Awaji Earthquake



Additional Sheer wall



Jacketing of columns



Additional steel braces

# Japanese Railway Network : Development of Railway Network in Tokyo Area

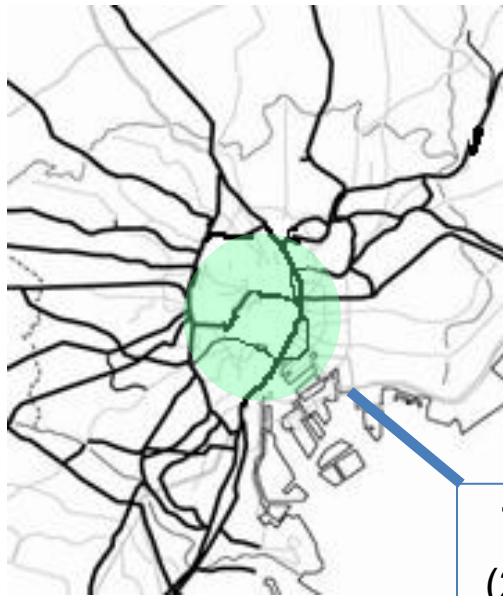
1950

Railway	
Route Length (km)	1,478 (100)
Passengers Carried (million/year)	2,258 (100)



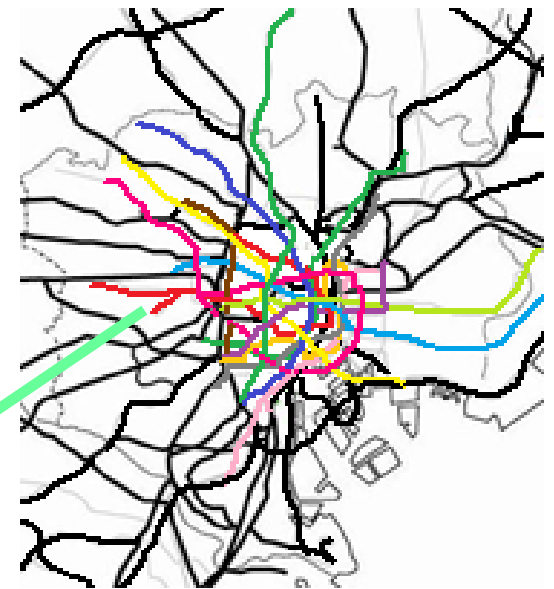
2000

Railway	
Route Length (km)	2,229 (151)
Passengers Carried (million/year)	12,940 (573)



Tram  
(200km)

- Construction of New line
- Increase of Tracks
- Introduction of Long train set and Large body car

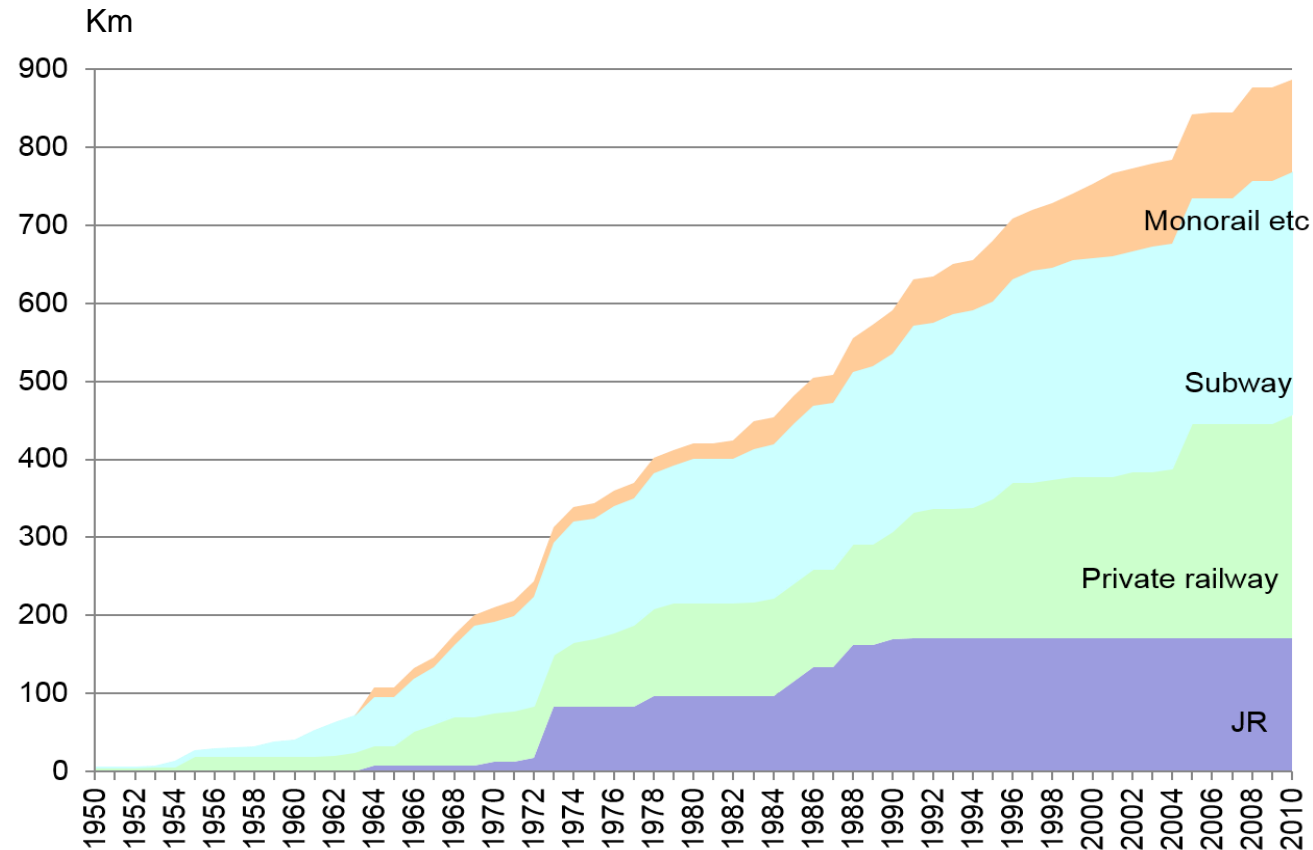


Subway  
(300km)

# Expanding urban railway network

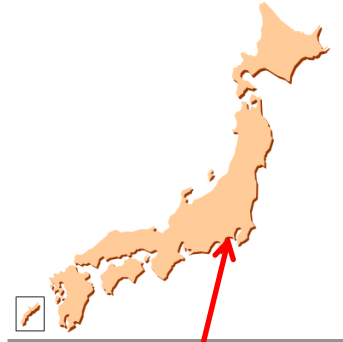
Railway network in Tokyo has reached approx.2,500km.

900km have been added to Tokyo's railway network since 1950.



# Access to Urban Centers : Tokyo Yurikamome

AGT developed to **access Central Tokyo** to and from Tokyo Waterfront City



Tokyo Metropolitan



Tokyo Sta.

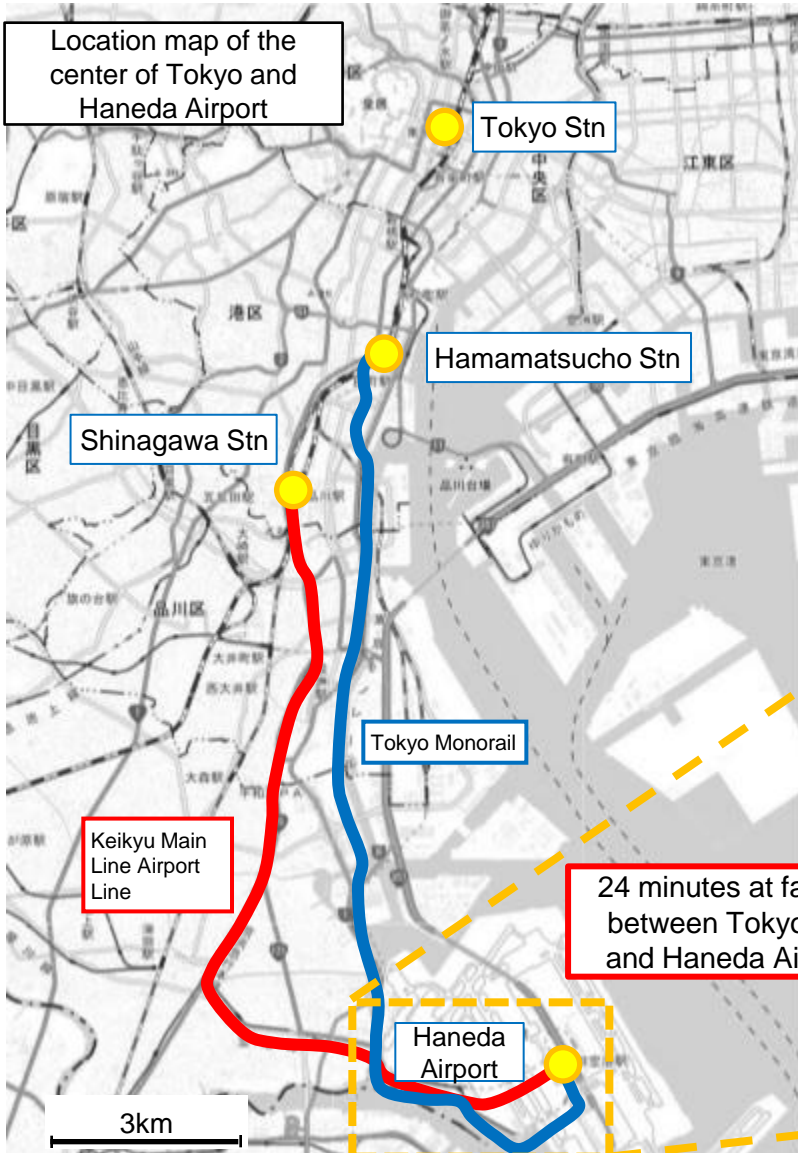
[Yurikamome]

- Start of Operation: Nov. 1995
- Operating Distance: 14.7km
- Line Name: Tokyo Waterfront New Transit Waterfront Line
- Number of Stations: 16
- Average Daily Passenger Traffic: Approx. 11,5000 (2014)

# Development of Access to Airport (Tokyo International Airport [Haneda Airport])

For railway access to Haneda Airport, there were significant changes since Tokyo Monorail started operation in 1964 in accordance with the holding of the 1964 Tokyo Olympic Games, including "Monorail extension (1993)", "Operation of Keikyu Kuko Line to Terminal as direct train service (1998)", and "Opening of International Terminal Station (2010)."

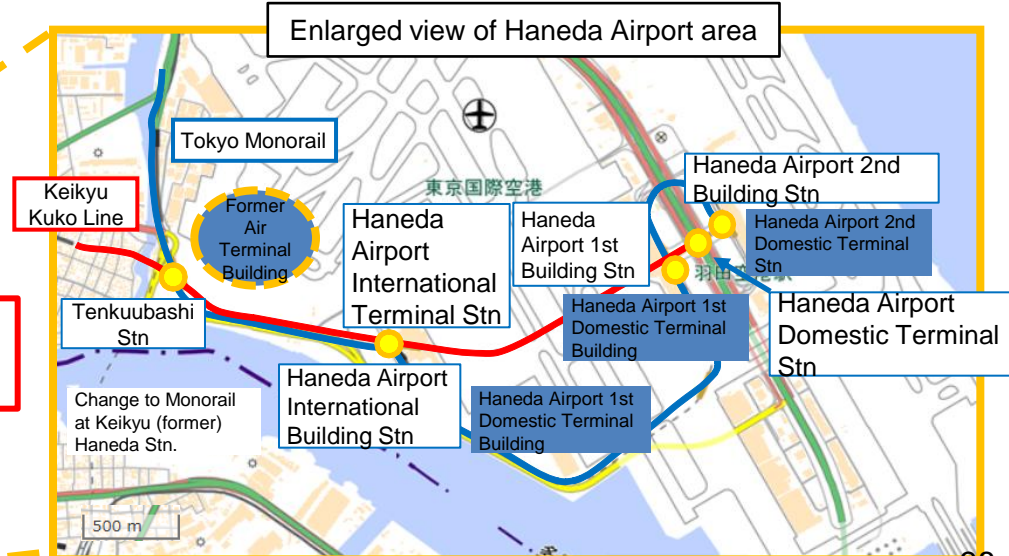
Location map of the center of Tokyo and Haneda Airport



Course of events in improvement of railway access to Haneda Airport

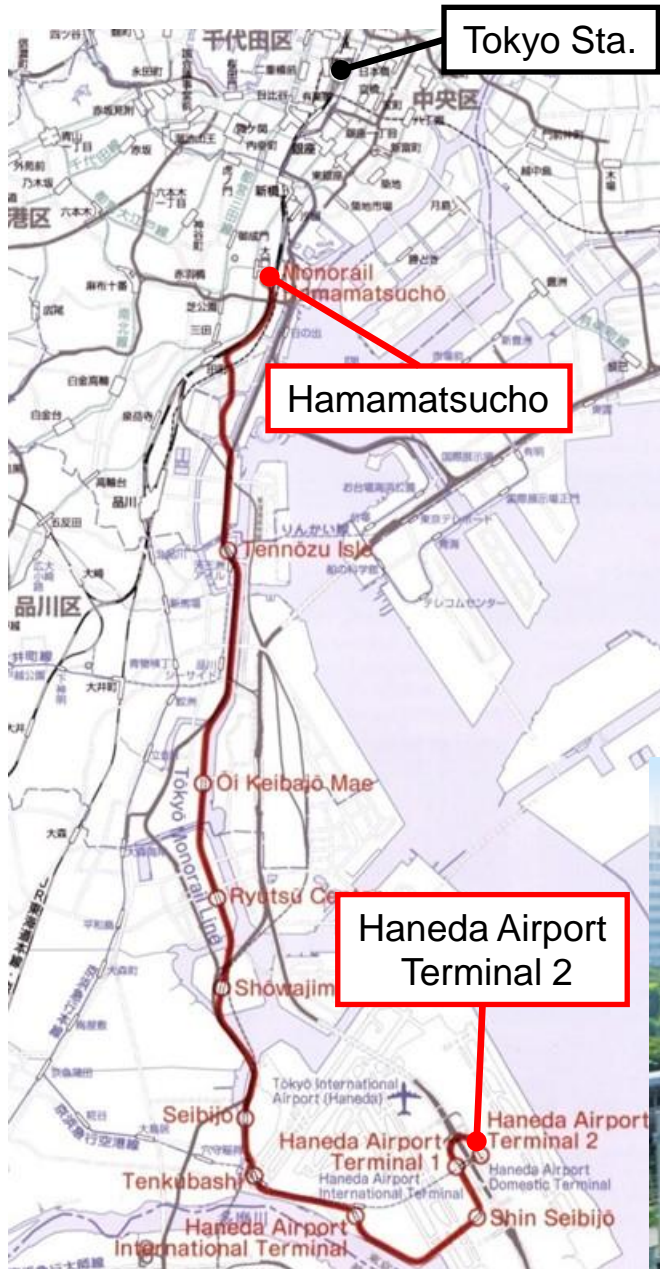
1964	Commencement of operation between Monorail Hamamatsucho Station and (former) Haneda Station.
1993	Commencement of operation of the extended line for Monorail Haneda Airport Station Commencement of operation of the extended line for Keikyu Haneda Station (present Tenkuubashi Station) (Change the train to Monorail for Airport)
1998	Commencement of operation of the extended line for Keikyu Hanedakuko Station
2007	Completion of passing track at Monorail Showajima Station, and start of operation of rapid train to Airport.
2010	Opening of the New International Passenger Terminal Building Station.
2012	Renovation of Keikyuukamata Station (platforms with two-layer elevated structure) and commencement of service

Enlarged view of Haneda Airport area



24 minutes at fastest between Tokyo Stn and Haneda Airport

# Example of Access to Tokyo International Airport : Tokyo Monorail



Monorail developed to **access Airport** to and from Central Tokyo

Tokyo Metropolitan



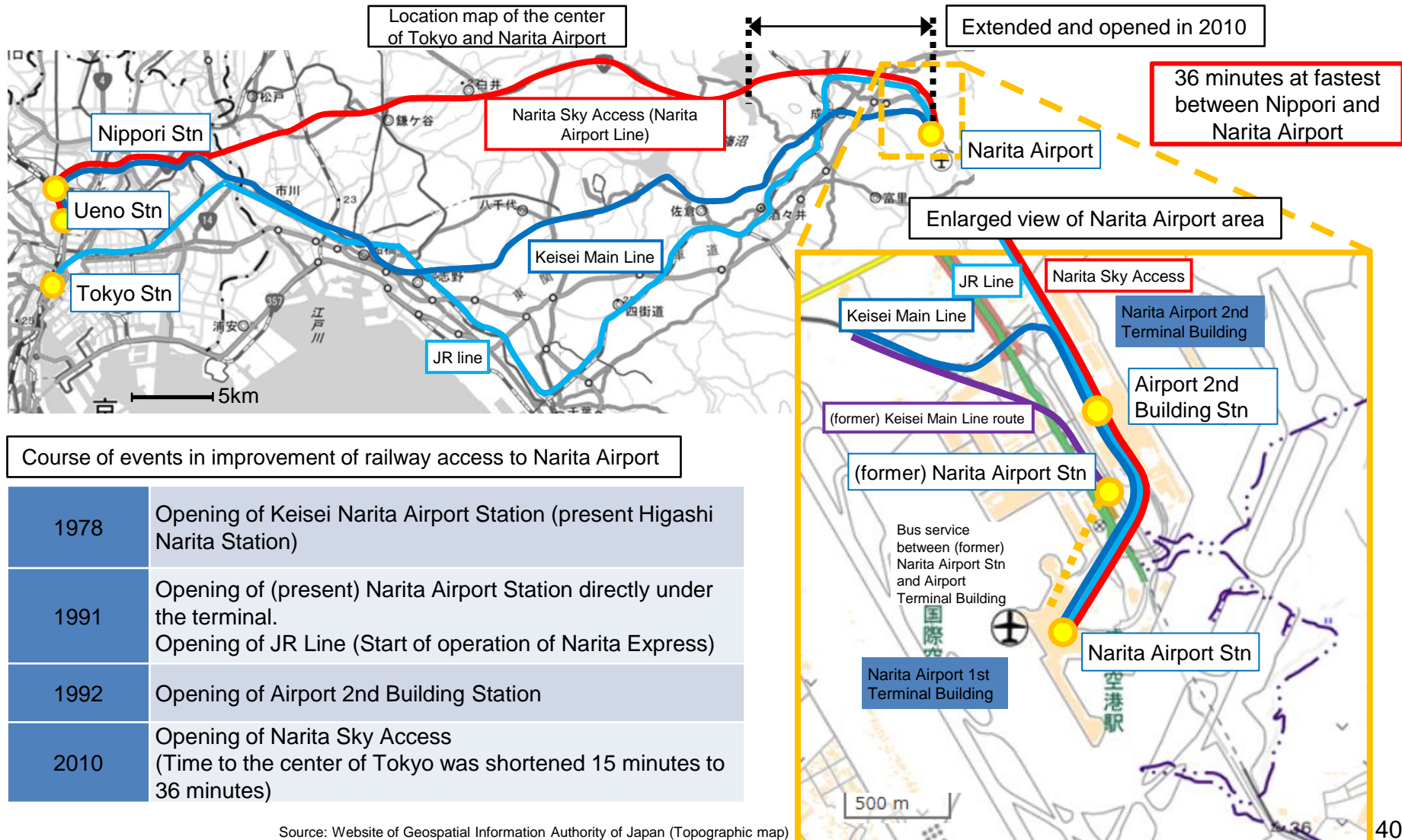
[Tokyo Monorail]

- Start of Operation: Sep 1964
- Operating Distance: 17.8km
- Line Name: Tokyo Monorail Haneda Airport Line
- Number of Stations: 11
- Average Daily Passenger Traffic: Approx. 125,000



# Development of Access to Airport (New Tokyo International Airport [Narita Airport])

For railway access to Narita Airport, there were significant changes since it started operation in 1978, including "Operation of JR / Keisei Line to Terminal as direct train service (1991)", "Opening of Airport 2nd Building Station (1992)", and "Opening of Narita Sky Access (2010)."

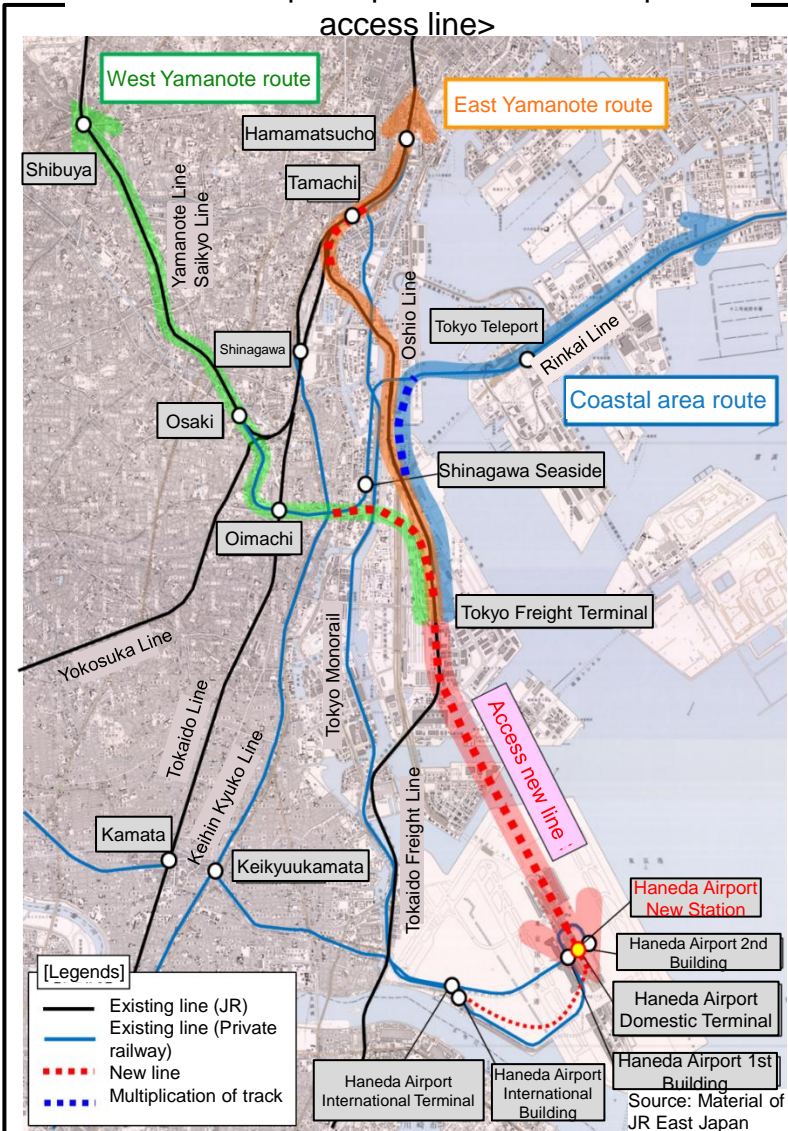




# New Railway Projects to Improve Access to Airport

In addition to the past development projects, a number of new railway projects that contribute to access between airport and the metropolitan area are under consideration.

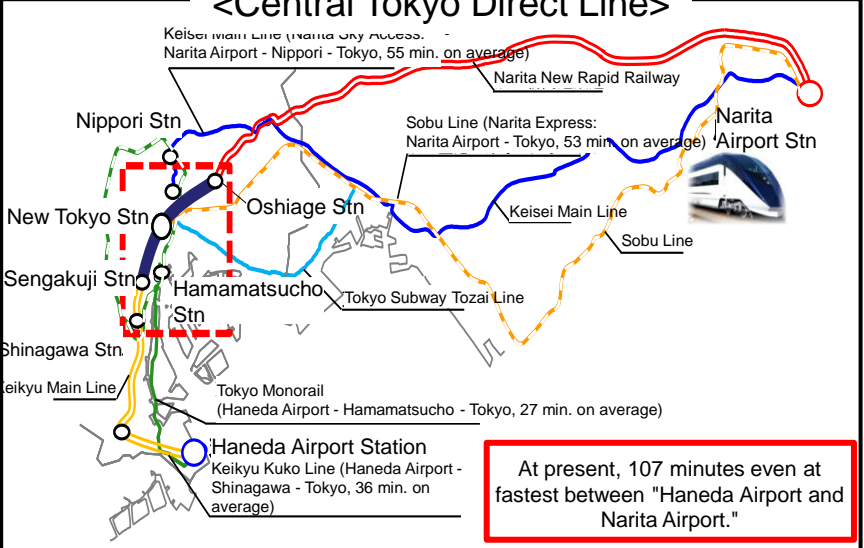
<JR East Japan's plan for Haneda Airport access line>



<Shinkuko Line (Kamakama Line)>



<Central Tokyo Direct Line>



# Examples for Use of Bus Transportation (Tokyo)

- Further enhance the convenience of public transportation aiming to accumulate the world-level business / housing functions and invite international investment and human resources.
- Aim to develop transport terminals that are convenient and provide clear information and to introduce BRT: (Bus Rapid Transit), a rapid transit system with excellent punctuality and rapidity, etc.

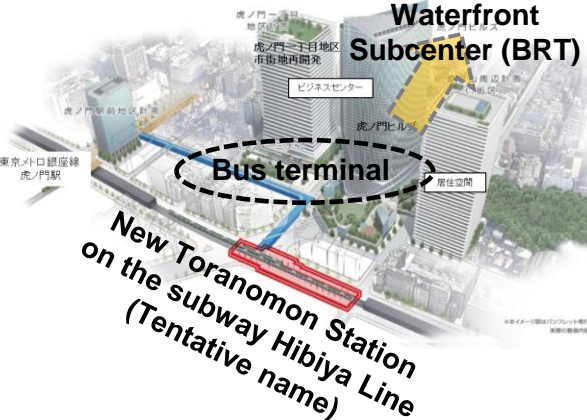
## Toranomon area



Image of Toranomon Bus Terminal

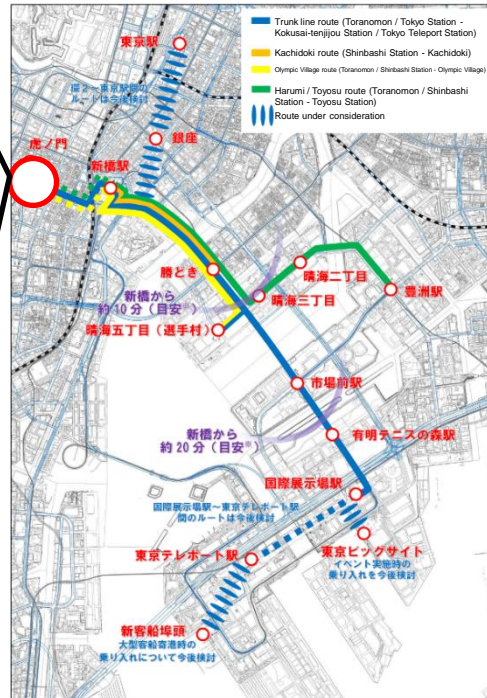


Image of New Toranomon Station on the subway Hibiya Line  
New Tokyo Waterfront Subcenter (BRT)



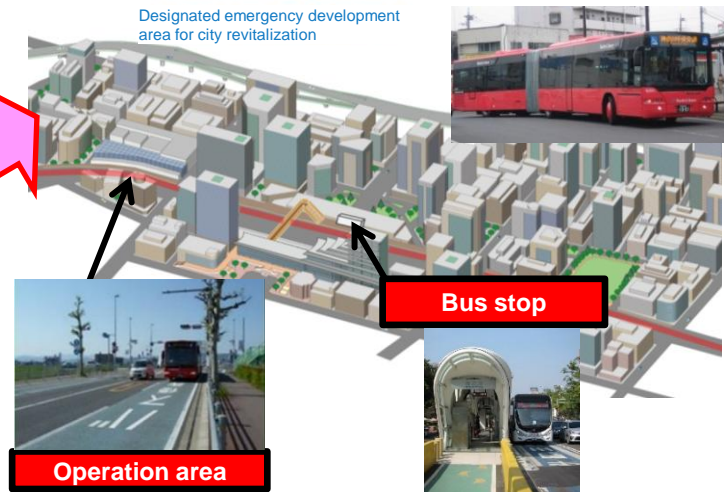
Develop a bus terminal and a new subway station connected to the terminal.

## BRT operation route connecting between central Tokyo and Waterfront Subcenter



## Development of operating areas, bus stops, etc.

Designated emergency development area for city revitalization



- Introduction of new technologies
  - Technology for enhancing positional alignment (automatic travel (positional alignment) control)
  - Upgrading of PTPS (Public Transportation Priority System)

Develop operation area of BRT, bus stops, etc.

# Examples for Use of Water Transportation (Tokyo)

- Private businesses operate water buses on ten lines in the Sumida River running along the center of central Tokyo, including Tokyo, Shinbashi, Akihabara, and Ueno, and in Tokyo Bay.
- Operation of water taxi started at some platforms in August 2016 as part of social experiment.



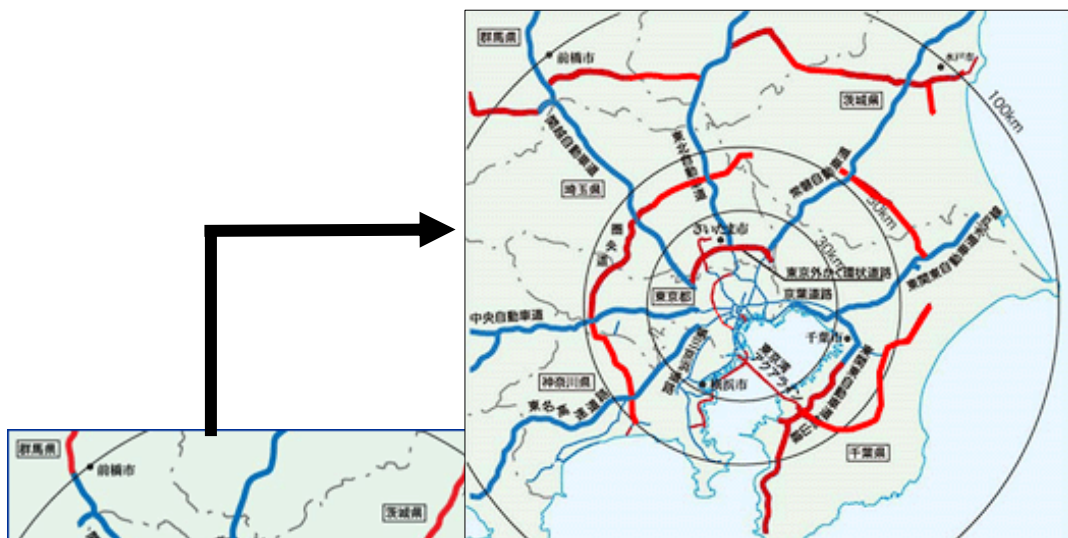
Water taxi



# Changes in Traffic Network Development in Metropolitan Area

In 1963, a traffic network of 3 rings and 9 radials was planned as the basic structure of road traffic in the Metropolitan Area, but delay in development of radial roads has been causing traffic congestion.

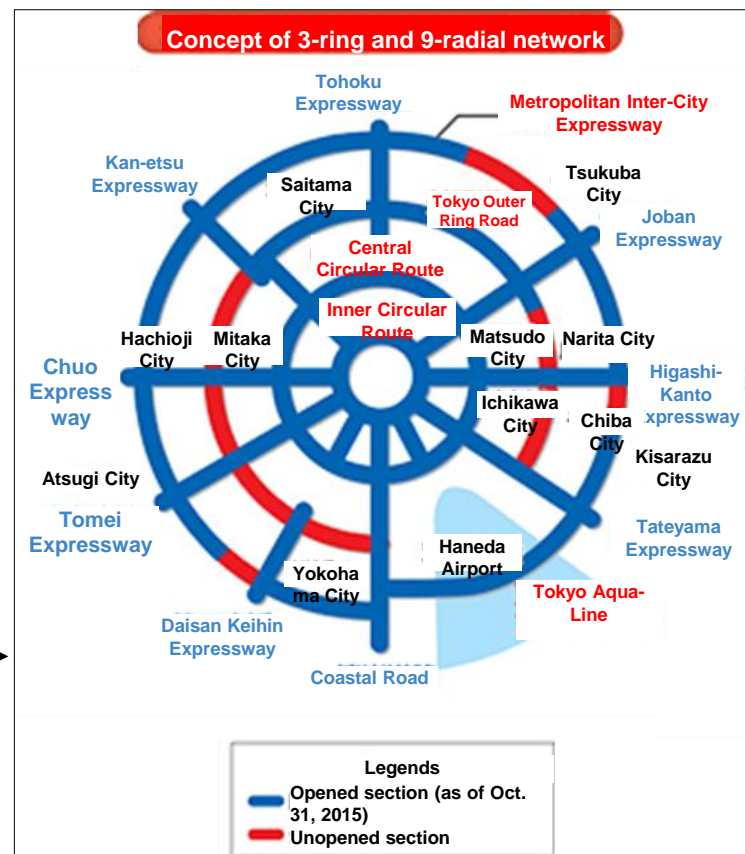
Planned to develop three ring roads (Central Circular Route, Tokyo Outer Ring Road, and Metropolitan Inter-City Expressway), aiming to solve the traffic congestion in central Tokyo.



As of Oct. 31, 2015



1990



# Japanese Expressway (1) History

- On July 15, 1963, the first expressway opened in Japan.  
(Meishin Expressway, Amagasaki, Hyogo – Kyoto – Ritto, Shiga 71km)
- 1965 Completion of Meishin Expressway (190km)  
(Nagoya, Aichi – Osaka – Kobe, Hyogo)

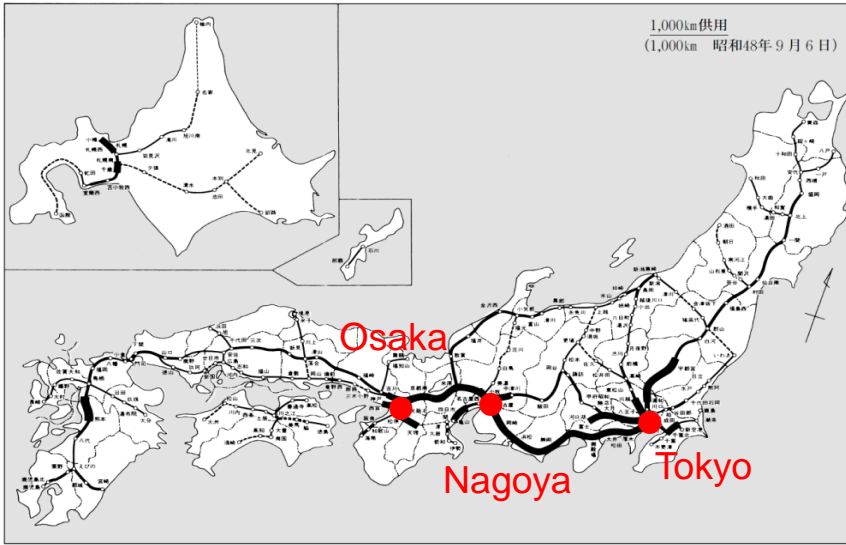


Photo: NEXCO-West

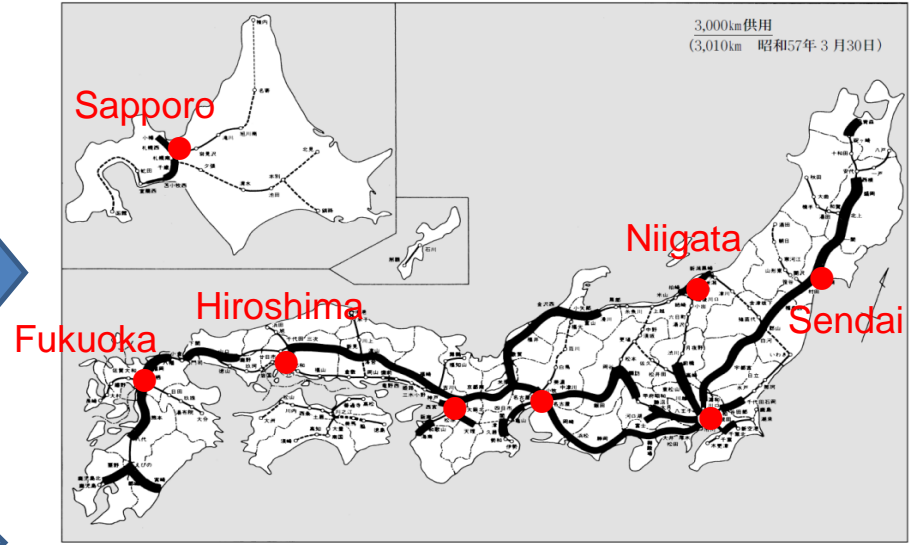


# (2) National Expressway Network Development

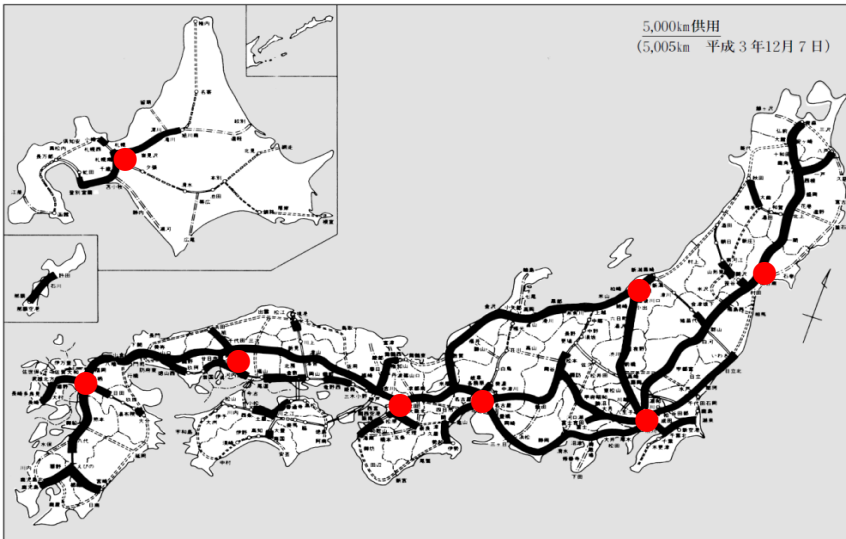
1,000km in service (Sept, 1973)



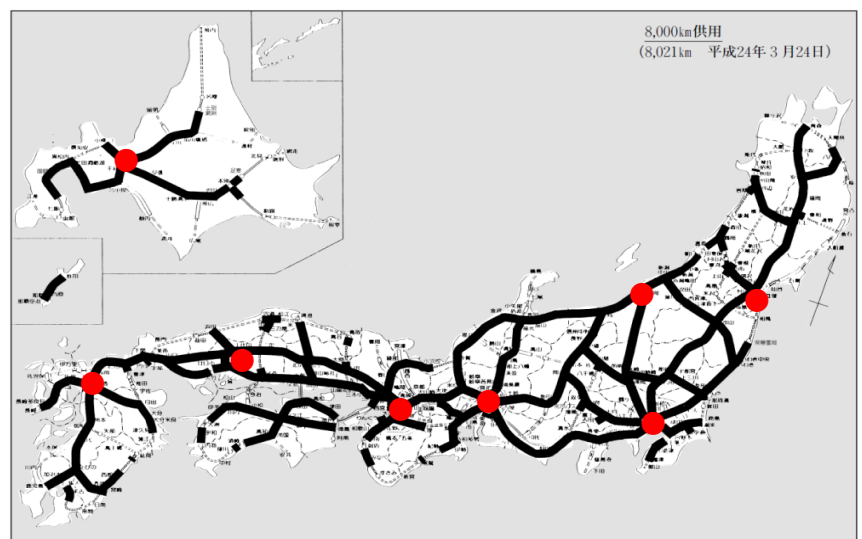
3,000km in service (Mar, 1982)



5,000km in service (Dec, 1991)

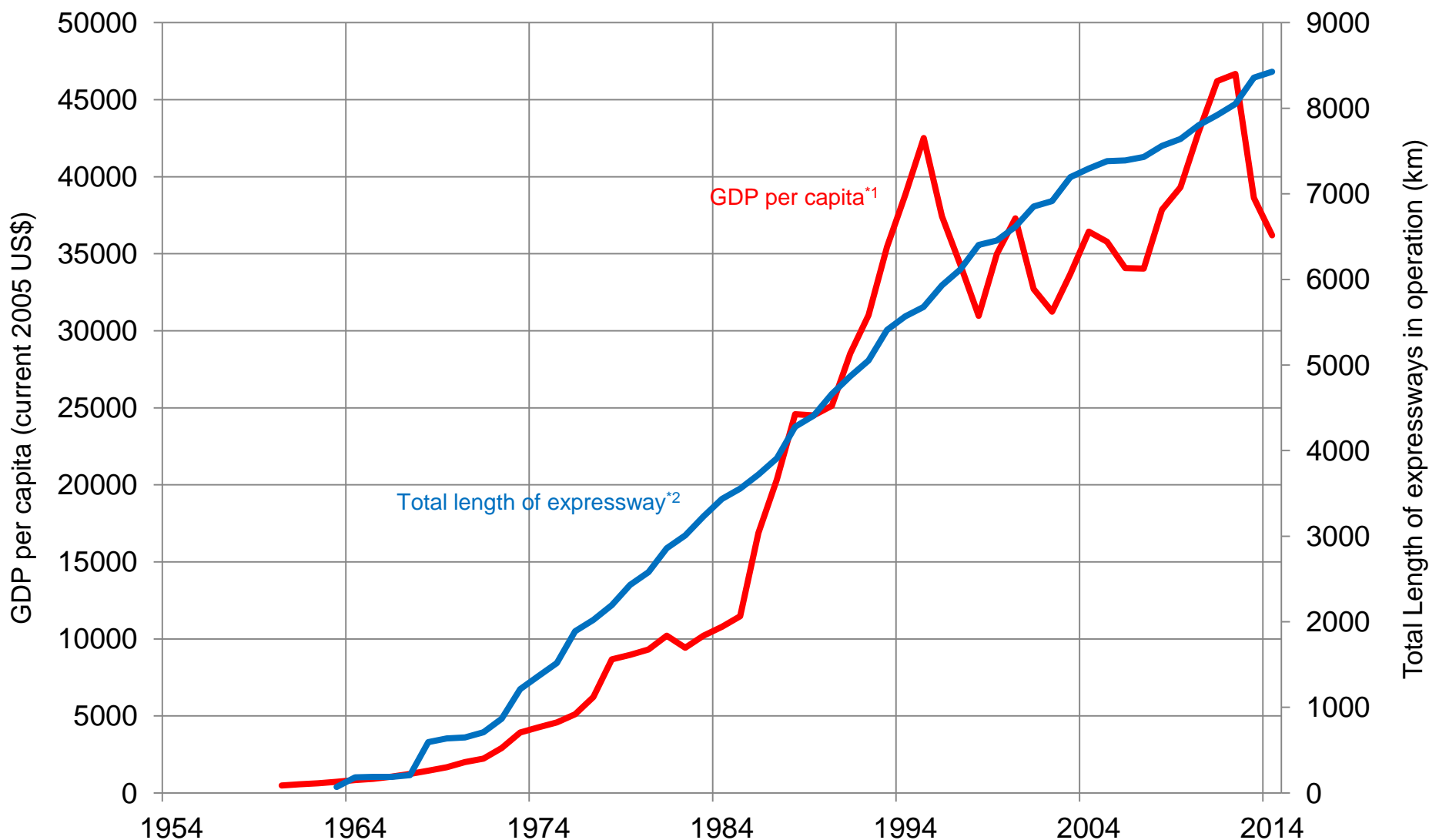


8,000km in service (Mar, 2012)



\* excluding the motorway of national highway

### (3) Change in the length of expressways and real GDP



Note:

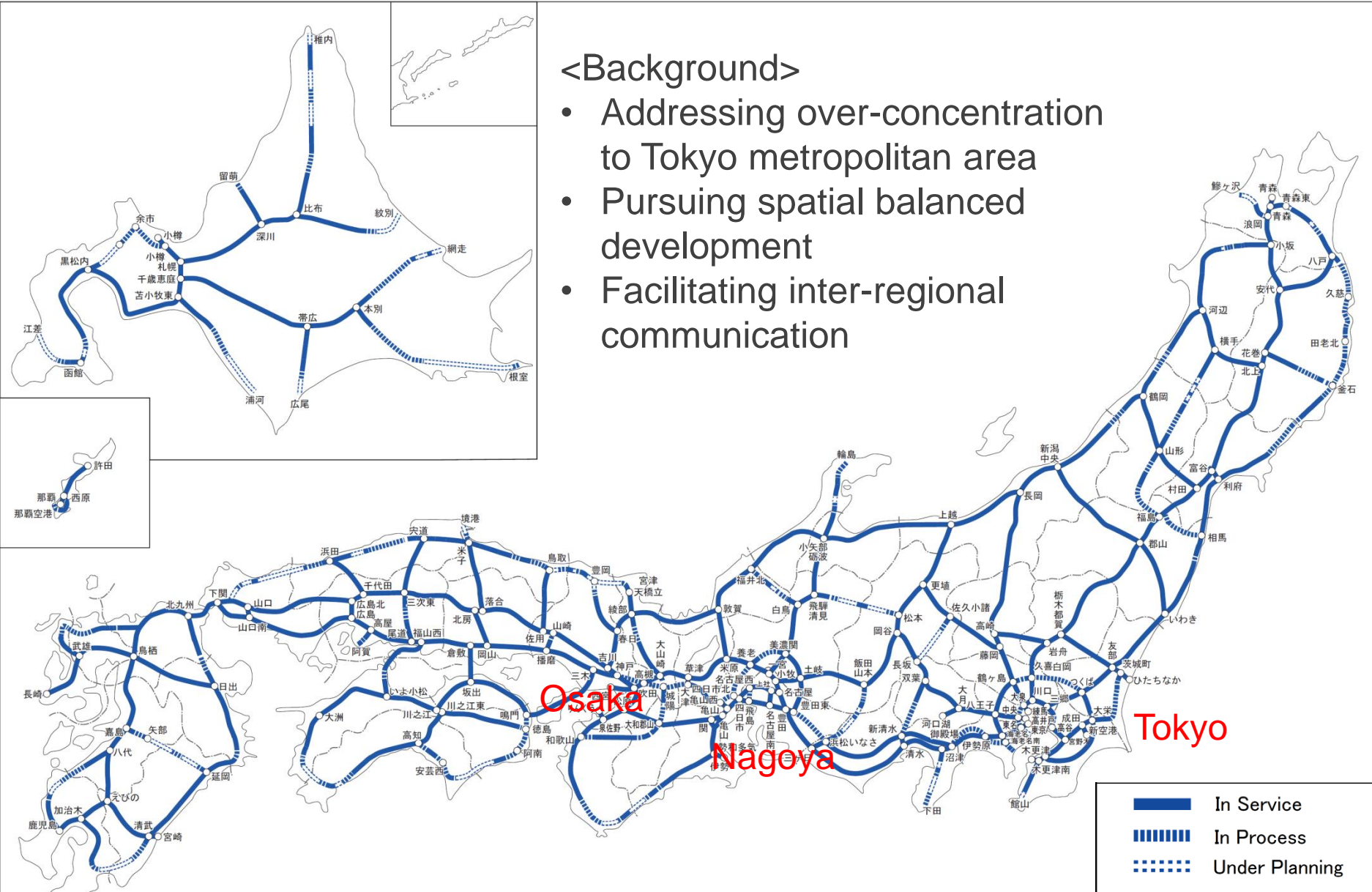
\*1: Current US\$, data from the World Bank "World Development Indicators" at <http://data.worldbank.org/country/japan>

\*2: Data from MLIT "Annual Road Statistics 2015" at <http://www.mlit.go.jp/road/ir/ir-data/tokei-nen/2015/nenpo02.html>

# (4) Current Expressway Network Plan (14,000km)

## <Background>

- Addressing over-concentration to Tokyo metropolitan area
- Pursuing spatial balanced development
- Facilitating inter-regional communication



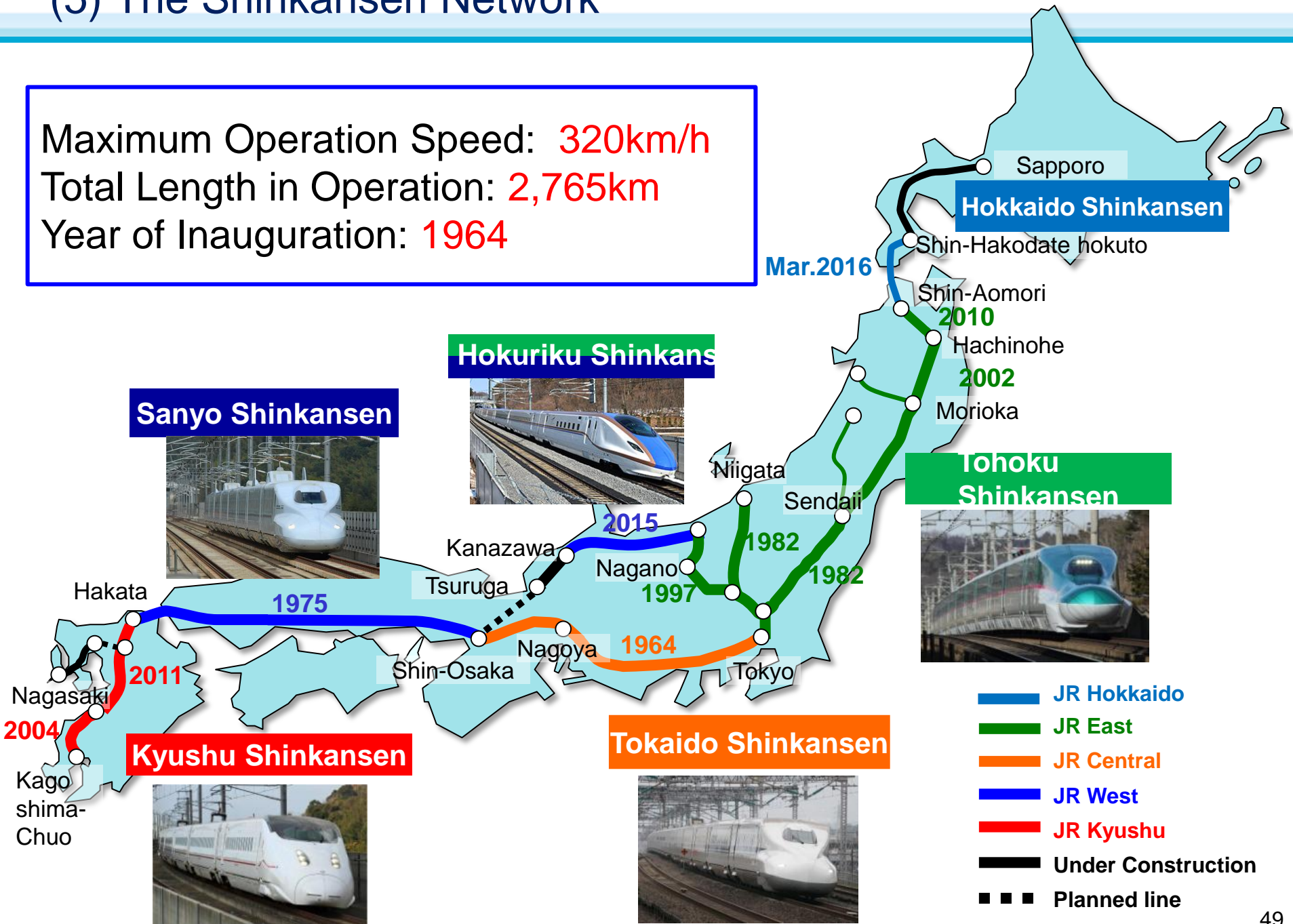
As of Jan. 2015

	In Service
	In Process
	Under Planning



# (5) The Shinkansen Network

Maximum Operation Speed: **320km/h**  
 Total Length in Operation: **2,765km**  
 Year of Inauguration: **1964**



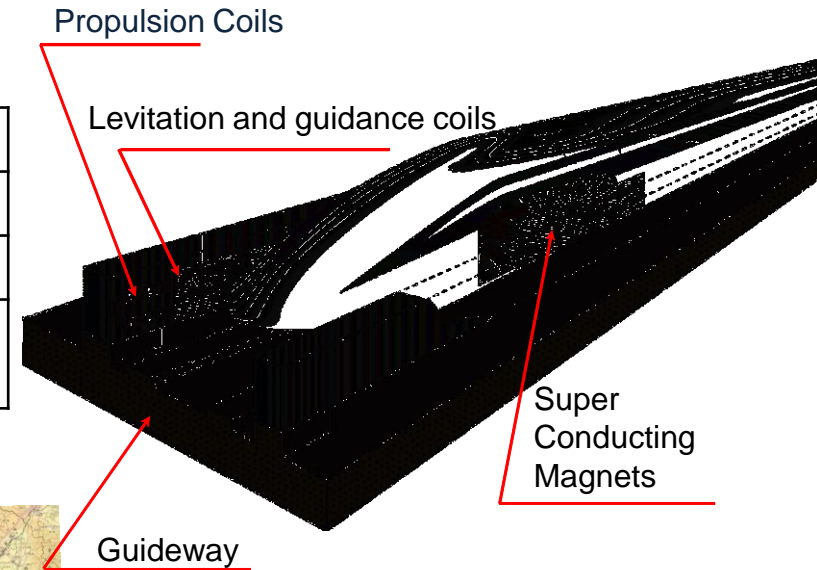
# (6) Super-conducting Maglev System

## ➤ Project Outline

Constructor & Operator	JR Central
Planned Route	Tokyo ~ Osaka
Mode of Maglev	Super-conducting Maglev System
Designed Running Speed(Max)	505 km/h

## ➤ Project Area

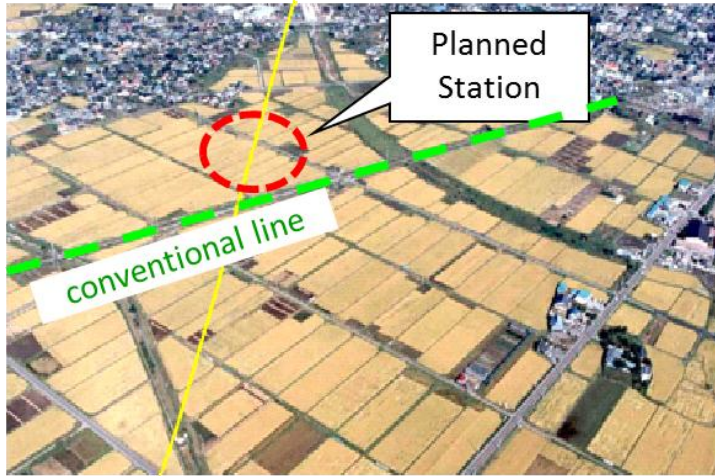
	Tokyo-Osaka	Tokyo- Nagoya
Length(km)	438	286
Journey time (minute)	67	40



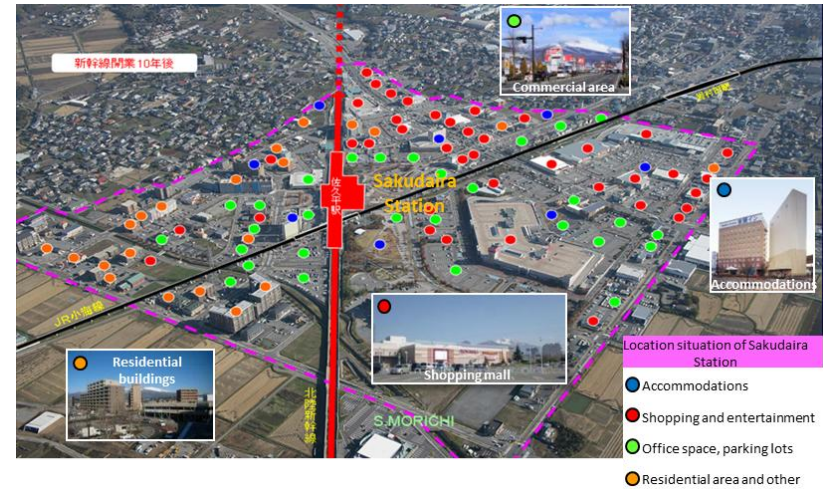
Experimental Train © JR central  
at Test Track

# (7) Regional Development by the Effect of Shinkansen Development

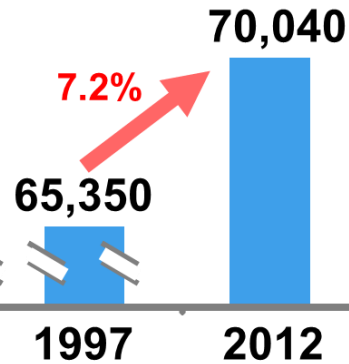
## Before(1997)



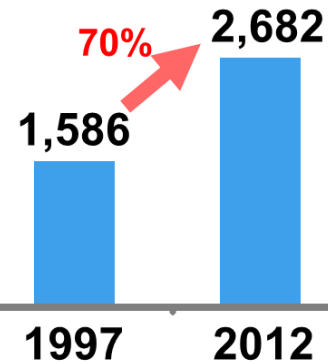
## After(2012)



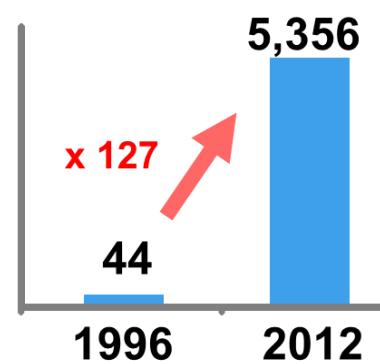
### Population (Saku City)



### Passengers (Sakudaira Sta.)



### Asset tax revenue (around Sakudaira Sta.) \$ thousand



# Support for Development of City Planning System

## [Issues]

- In the review of the Yangon urban development master plan, etc., we pointed out the absence of legal system that secures the practicability of city planning as well as the importance of securing its effectiveness in the future.
- In response to the successive launch of urban development projects by private enterprises in Yangon, it is required to establish city planning system that secures effectiveness and development permission scheme in order to facilitate development projects smoothly as well.

## [Contents of support]

- The MLIT started to support system development under the Bill for Urban and Regional Development Planning in fiscal 2014, and conducted the exchange of opinions and follow-up including expert etc. in 2015 and 2016. (The Bill to be introduced to the Diet)
- Enforcement regulations, etc. need to be formulated after passage of the Bill, so JICA's experts on urban policy are to be dispatched around February this year.

## <Professional Meeting in 2016>



- In addition to intergovernmental information exchange, development of human resources who engage in "housing policy", "housing supply", etc. and technical cooperation in housing supply planning and supply system establishment have been implemented.
- In January 2016, a memorandum was executed between the Ministers of both countries concerning the promotion of cooperation in urban and housing fields, and another memorandum was executed in September of the same year at the working-level of both countries concerning cooperation in the housing finance field.  
In November, when the Administrative Vice-Minister visited Japan, he requested Japan's support in establishment of housing finance system for housing supply under the housing master plan.
- In December, when Mr. Ishii, Minister of Land, Infrastructure, Transport and Tourism, visited Myanmar, a memorandum was exchanged with the Minister U Win Khaing in order to further promote cooperation in housing finance.
- Japan has dispatched experts in the housing field since October 2016.

## [Recent activities]

- Feb. 2016: Conducted a training seminar on housing policy in Japan (20 persons).
- Sep.: Conducted a training seminar on housing policy in Myanmar.
- Nov.: Japan accepted some trainees in the housing supply / policy field (10 persons) and housing finance (6 persons).
- Dec.: Minister Ishii (MLIT) visited Myanmar. Signed the cooperation memorandum (revised version) in order to further promote cooperation in housing finance. A seminar on earthquake-resistant buildings was held in Myanmar.
- Feb. 2017: Japan is going to accept 5 trainees (advanced course) in the housing finance field.



Participants in a local seminar



Training seminar in Japan

# Activities in the Construction Industry Field

## Development of business environment

- Held "Construction Industry System Seminar" in January 2015 jointly with the Ministry of Construction in order to improve the business environment of local Japanese companies. In the Seminar, Japan's permission systems in the construction industry, etc. were introduced. We plan to invite the persons in charge from next fiscal year and hold training seminars for land and construction systems.
- We plan to support studies on land policy through the Policy Collaboration Strengthening Program by National Graduate Institute for Policy Studies and JICA (FY2017 and FY2018).
- Support the Japan-Myanmar Construction Round-Table Conference, which makes practical discussions between government and private sector, for solution of specific and highly urgent issues found in the construction field.

\* Participating organizations / groups

- Myanmar side: Ministry of Construction, public service corporations, Ministry of Planning, Ministry of Revenue, etc.
- Japan side: MLIT, Overseas Construction Association of Japan, Inc., etc.



▲ Second Conference (Sep. 2016)

## Creation of business opportunity

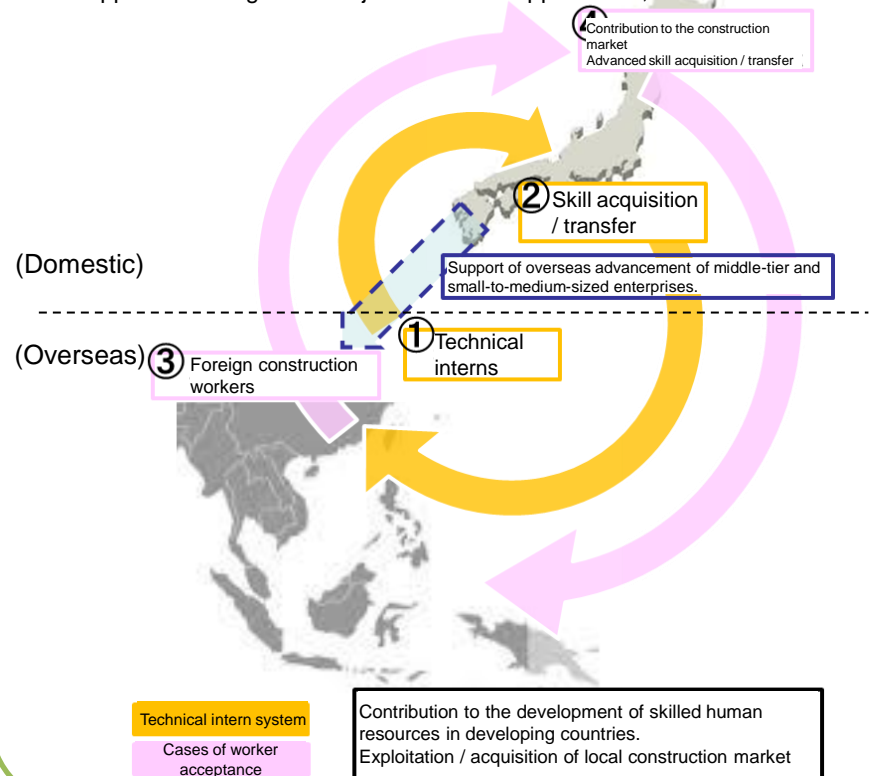
- Support of the advancement of construction and real estate companies to the market
  - Information exchange meeting between Myanmar's Minister of Construction and the Overseas Construction Association of Japan, Inc., etc.
- Support of overseas advancement of middle-tier and small-to-medium-sized enterprises.
  - Dispatch of mission team
  - Holding of business matching, etc.



▲ Business matching event

## Acceptance of technical interns, etc.

- Further optimization is planned for the project of accepting foreign construction workers in relation to the acceptance of technical interns from overseas.
  - [Before entry into the country]
    - Support leading projects to conduct prior education / training considering construction-specific activities.
    - Establishment of general-purpose education / training program
  - [Period of stay]
    - Support the acquisition of skills / qualification
    - Establishment of evaluation system according to skills
  - [After return to Myanmar]
    - Support business matching between local and Japanese construction enterprises
    - Support matching between job offers and applications, etc.



1. Comparison of Myanmar and Japan
2. Urban issues in Myanmar
3. Urban issues and responsive actions experienced by Japan
4. **Overseas deployment of infrastructure systems by the Japanese government**

# Promotion of Overseas Deployment of Infrastructure Systems

In March 2013, under the prime minister's direction, a ministers meeting chaired by Chief Cabinet Secretary (Ministerial Meeting on Strategy relating Infrastructure Export and Economic Cooperation) was launched to discuss export of infrastructure, economic cooperation, etc. comprehensively.

In the same Meeting held in May 2013, "Infrastructure system export strategy" was decided. The target is to receive orders for infrastructure totaling 30 trillion yen in 2020 (10 trillion yen for 2010). Centering on the following five pillars, specific measures are promoted.

- (1) Promote public-private cooperation in order to strengthen the global competitiveness of enterprises.
  - Effective use of policy support tools
  - Support for area-wide / broad-based activities
  - Consistent support for activities from upstream to downstream
  - Promotion of various and powerful top sales and strategic PR
  - Strengthening of public-private cooperation system, etc.
- (2) Support for exploitation / development of enterprises, local governments, and human resources who are expected to lead overseas deployment of infrastructure.
- (3) Acquisition of international standards using advanced technologies, knowledge, etc.
- (4) Support for entry into the infrastructure field expected to be a new frontier
- (5) Promotion of securing stable and inexpensive supply of energy mineral resources from overseas



# Support for Area-wide / Broad-based Activities

Strategic development of various support tools for economic cooperation

Support for M/P and F/S projects

Utilization of technical cooperation and grant aid

Utilization of yen loans

Support for strengthening of public finance



- ◆ Support formulation of a comprehensive master plan necessary for community development, system development, etc. in the target county.
- ◆ Support F/S, etc. for large-scale infrastructure projects, etc.

- ◆ Speed up the procedure of yen loan
- ◆ Introduce yen loan to be repaid with foreign currency
- ◆ Yen loan for sub-sovereigns
- ◆ Introduce US\$-denominated yen loan, etc.

- ◆ Expand the target of overseas investment and financing
- ◆ Strengthen JBIC function
- ◆ Expand the international trade insurance system
- ◆ Establishment of JOIN and JICT, etc.

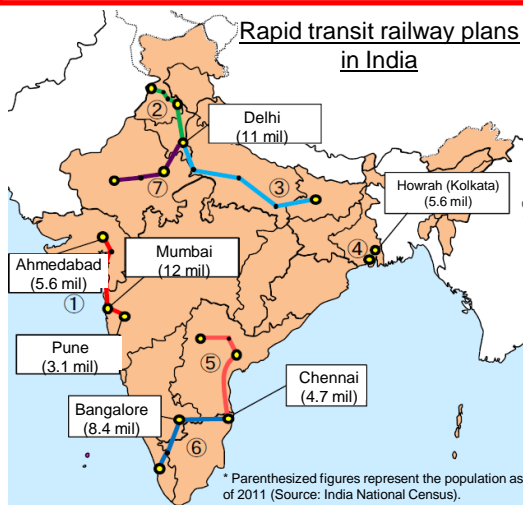
# Examples of Area-wide Development

## Traffic infrastructure, such as rapid transit / urban railways, and perinheral development

### [India] Mumbai-Ahmedabad rapid transit railway, urban railway

- Rapid transit railway construction plan for connecting Mumbai and Ahmedabad (about 500 km, almost equal to the distance between Tokyo and Osaka) in about 2 hours. Total project cost is about 1.3 trillion yen (according to the media report). Of the seven routes of the rapid transit railway plan, this route was first considered.
- India also has a large number of construction plans for urban railway (metro etc.). Japan supported metro construction projects in Delhi, Chennai, Kolkata, etc. through ODA (yen loan, technical cooperation).

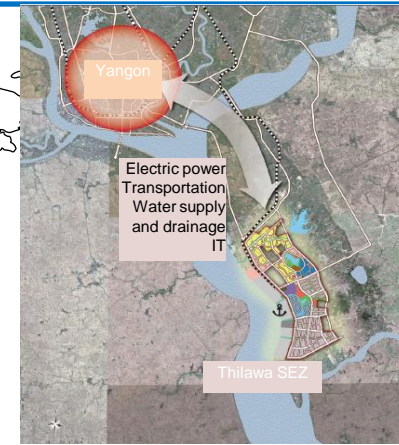
### Rapid transit railway plans in India



## Basic infrastructure development and urban development

### [Myanmar] Thilawa Special Economic Zone Development

- Newly developed a special economic zone (about 24 km<sup>2</sup>) in Thilawa, about 20 km of south of central Yangon. A Japan-Myanmar joint venture developed the zone and Japan's ODA supported the development of peripheral infrastructure.



## Industrial development of resources etc. and development/operation of oceanfront areas including port of shipment

### [Mozambique] Nacala Corridor Development

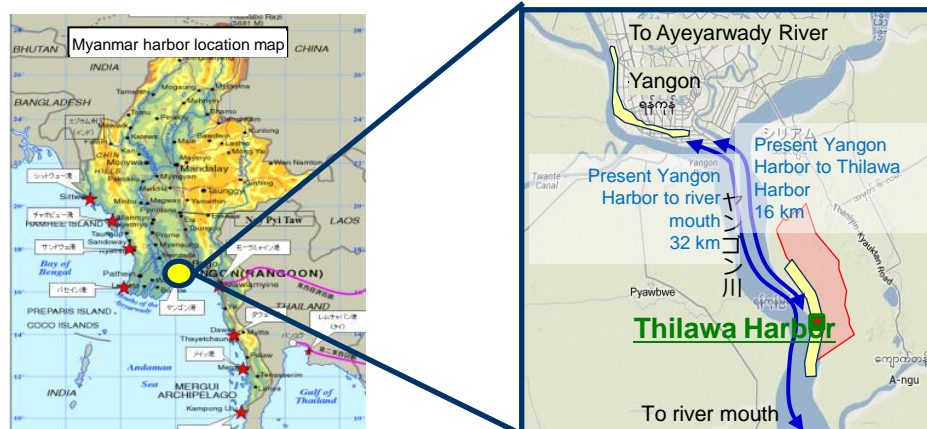
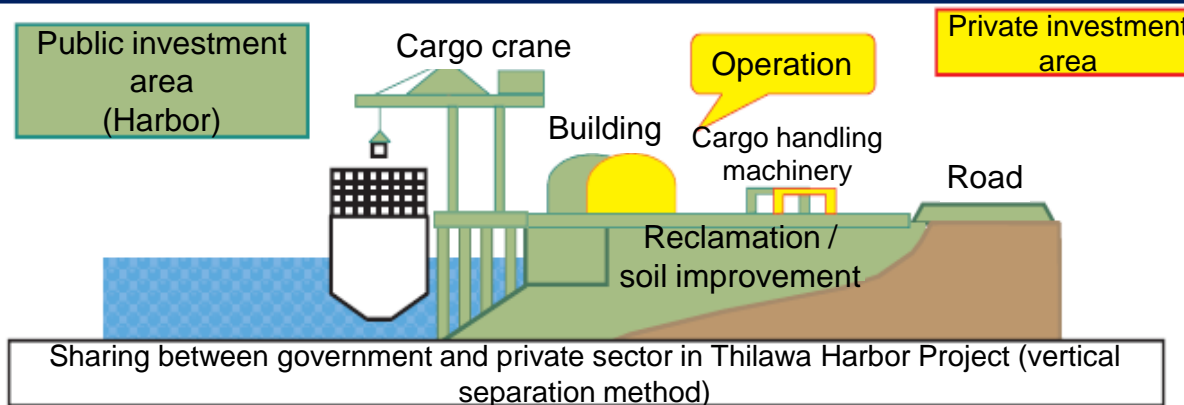
- In Nacala Corridor, development of distribution infrastructure is under way to support coal development and agricultural development in inland areas. Japan is supporting the functional strengthening of container terminals including Nacala Port, which is the entrance of Nacala Corridor, with yen loan, grant aid, and technical cooperation.
- Japanese companies have determined to invest and participate in the development / operation projects for Nacala Railroad and Coal Terminal, which are under development by railroad and port operating companies.



Nacala Port

# Development of Thilawa Special Economic Zone

- A special economic zone with the total area of about 2,400 ha being developed by the Japan-Myanmar consortium. Japan is supporting the development of peripheral infrastructure, etc. in the form of ODA as an "All Japan" project.
- For the industrial park in the zone, 78 companies (including 39 Japanese companies) already concluded a preliminary contract (as of Dec 2016).
- This SEZ is expected to support job creation and economic development in Myanmar as a base of advancement for foreign enterprises including Japanese ones. This project is also expected to serve as a model case for foundation of enterprises and establishment of various systems including customs clearance, finance, and insurance through the promotion of development under international standards including environmental impact assessment.



Field	Project	Amount of fund provided
Electric power	50 MW power station, power lines, related facilities, etc.	34.8 billion yen
Logistics	Expansion of Thilawa Harbor, terminal equipment	
	Access road between Yangon and Thilawa	4.6 billion yen
Water	Yangon service water development	23.6 billion yen
Communication	Development of country-wide communication network	10.5 billion yen

Thilawa-related yen-loan projects

Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development (JOIN) invests in and provides hands-on support to local entities that undertake projects for overseas transport infrastructure and urban development together with Japanese entities, utilizing the knowledge, technologies, and experiences accumulated in Japan. (Founded on Oct. 20, 2014)

Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development: abbreviated to JOIN

## 《Background of foundation》

- The world, including newly emerging countries, has huge demand for infrastructure projects.
- A type of project that utilizes private sectors is increasing, expecting their funds and know-how.
- It is difficult for private sectors to enter into transport / urban development projects by themselves due to the characteristics including time-consuming development, demand risk in the operation stage, and influence of the local government.
- Included infrastructure system export strategy etc. in the governmental policy.

[Government policy]

- Infrastructure system export strategy (decided by the Ministerial Meeting on Strategy relating Infrastructure Export and Economic Cooperation on May 17, 2013)
- Prime Minister Abe's speech on infrastructure system (Jan. 24, 2014)
- High quality infrastructure partnership (May 21, 2015)
- Follow-up measures for high quality infrastructure partnership (Nov. 21, 2015)
- Initiative to expand the export of high-quality infrastructure (May 23, 2016)
- "Japan Restoration Strategy" revised in 2016 (June 2, 2016, Cabinet Decision)

## 《Main operations》

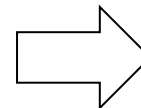
- **Investment (joint investment with private sectors)**
- **Hands-on support (dispatch of officers and engineers, etc.)**
- **Negotiation with the target country**

## 《Support projects》

- **Transportation projects**
  - Passenger / cargo transport projects by railroad / vessel / airplane
  - Maintenance and management of railroads, roads, ports, and airport facilities, etc.
- **Urban development projects**
  - Construction of buildings including housing, hotels, and offices.
  - Operation and maintenance of parks and sewerage, etc.
- **Projects that support the above-mentioned projects**

## 《Effects of support》

- Take in growth in the world market by entry into overseas markets.
- Expand the opportunity for related industries to obtain orders by participation in project operation.
- Improve the overseas business environment of Japanese enterprises by infrastructure improvement.



Contribute to the sustainable growth of Japanese economy.

Reference: Projects that decided to receive support from Japan

(i) Vietnam Thivai Port Terminal Development / Operation Project (approved by the Minister on Oct. 2015), (ii) USA Texas Rapid Transit Railway Project (approved by the Minister on Nov. 2015), (iii) Brazil Urban Railway Development / Operation Project (approved by the Minister on Dec. 2015), (iv) Myanmar Complex City Development Project (approved by the Minister on July 2016)

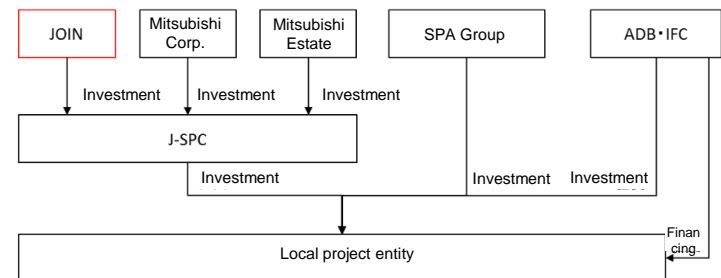
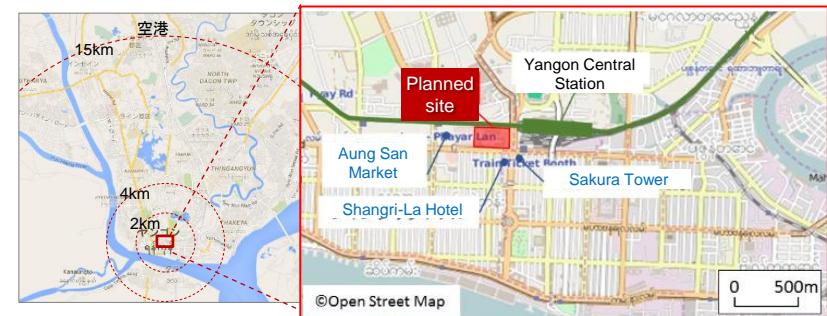
# [JOIN's Urban Development Project] Myanmar Yangon Landmark Project

A project for constructing and operating complex facilities including offices as the landmark of Yangon near Yangon Central Station, which is the center of business and commerce, with the investment by Japan Group, consisting of Mitsubishi Corp. \*1, Mitsubishi Estate \*2, and JOIN, and Myanmar SPA Group.

Investment and financing from international financial institutions --- ADB (Asian Development Bank) and IFC (International Finance Corporation) -- are also planned.

The first project of JOIN in the urban development field.

- \*1 Mitsubishi Corp.: A general trading firm developing multilateral operations in broad industrial fields with the corporate framework consisting of 7 groups (Global Environment & Infrastructure Business, Industrial Finance, Logistics, & Development, Energy Business, Metals, Machinery, Chemicals, and Living Essentials) and Business Service Group.
- \*2 Mitsubishi Estate: General real estate developer undertaking a lot of projects, including town planning in Marunouchi, Tokyo, and development / operation projects for office buildings, commercial facilities, housing, hotels, etc. and actively entering into overseas markets as well.



\* From the left, office building, office building, hotel / service / apartment building, condominium building

\* The low-rise building in front is a hotel development project to renovate the existing building, which is different from this project.

Project Scheme Figure

Taking today's opportunity, I sincerely hope for realization of the promotion of urban development here in Myanmar in close cooperation between governments and businesses of Myanmar and Japan.

Thank you very much for your attention.