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

Japan‘s Cooperation for Urban Development in Indonesia

Dr. Hiroto IZUMI,
Special Advisor to the Prime Minister

September 5, 2017

1. Comparison of Indonesia and Japan
2. Urban Development: challenges in Indonesia
3. Urban Development: experience and responses in Japan
   - 3-1. Experiences of Urban Policy in Japan
   - 3-2. Development of Regional Transport Network
   - 3-3. TOD: Urban Development harmonized with Transportation Network
   - 3-4. Urban Redevelopment
   - 3-5. Strength of Japanese Cities: Smart City
   - 3-6. Experiences of Housing Policy in Japan
   - (ref.) Urban Development Schemes related to Indonesia's challenges
4. Dissemination of infrastructure systems by Japanese government
   - 4-1. Structure for Promoting the dissemination of infrastructure systems
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Outline

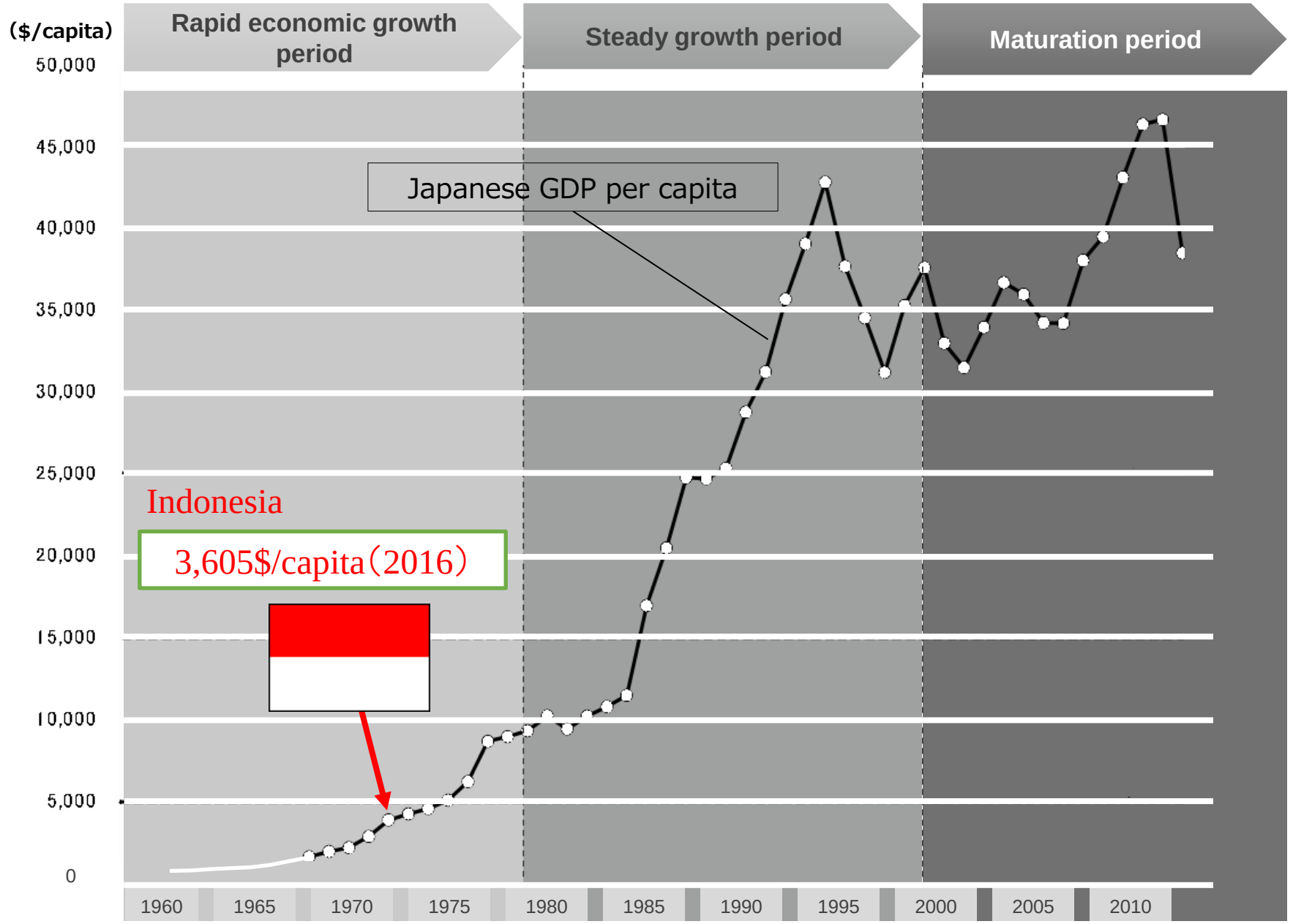
■ Japan

Population	About 127 million
Total land area	About 378,000 km^2
GDP growth rate	0.5%

■ Indonesia

Population	About 255 million
Total land area	About 1,890,000 km^2
GDP growth rate	5%

Changes in GDP per capita

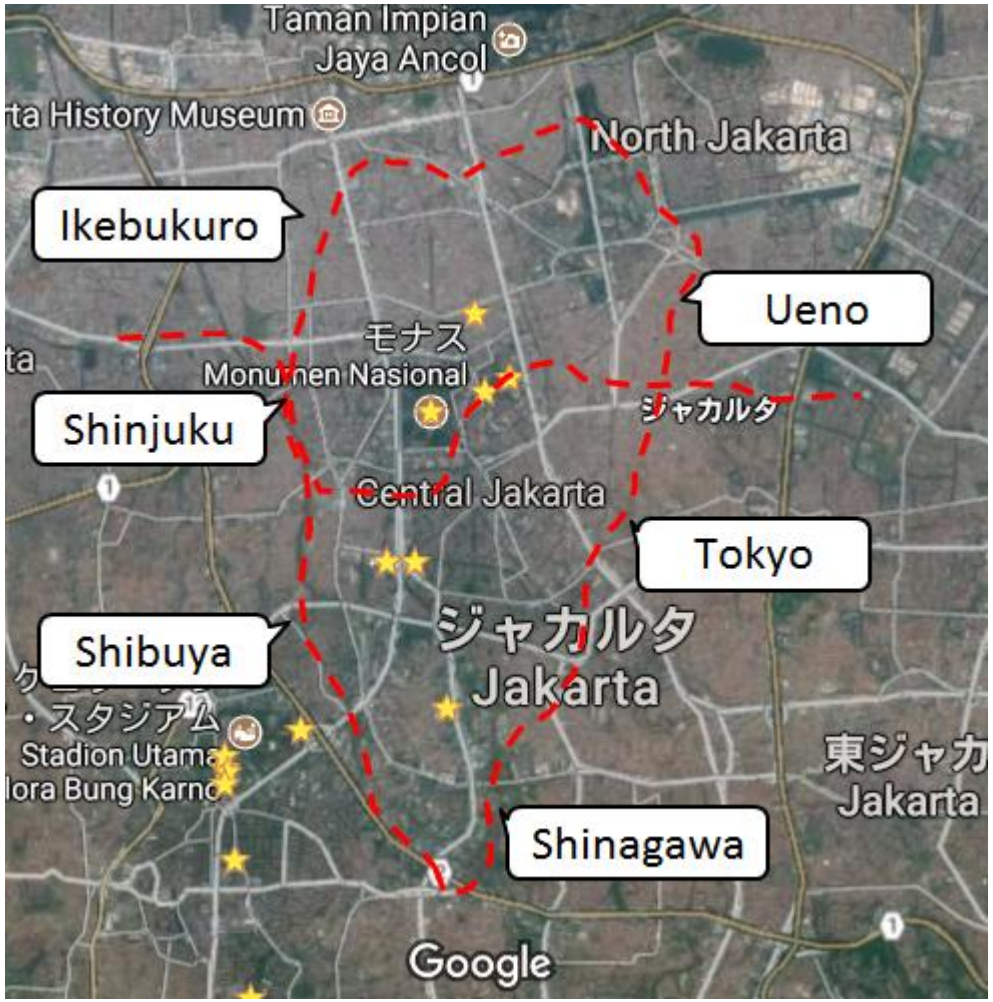


Comparison of Jakarta and Tokyo (“Yamanote Line”)

Scale≒Yamanote Line Tokyo

Population ≒10mil.
(estimated to be 11.3mil in 2030)

	Area (㎢)	Population	Density (/ha)
Tokyo 23ward	623	9,214,130	148
Tokyo Metropolitan※	13,557	36,428,471	27
DKI Jakarta	740	10,178,000	145
JABODETABEK	7,315	31,715,323	43



※Tokyo, Saitama, Kanagawa & Chiba

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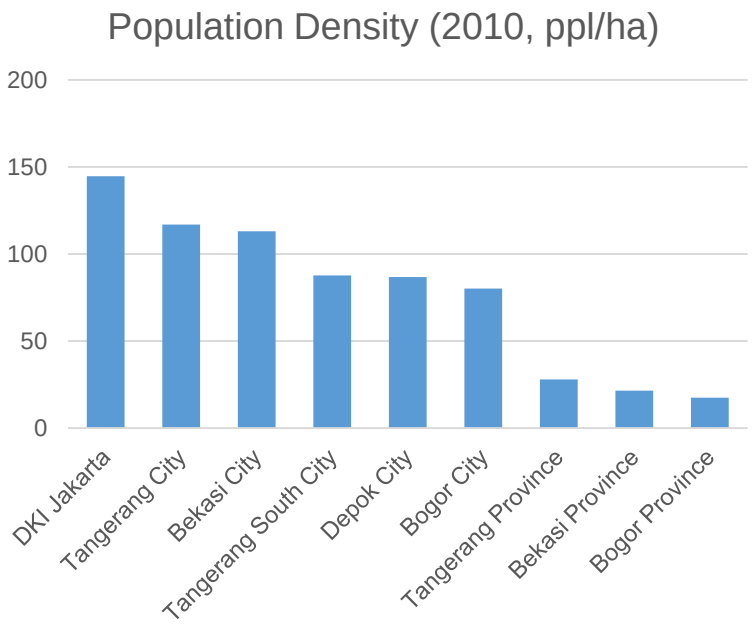
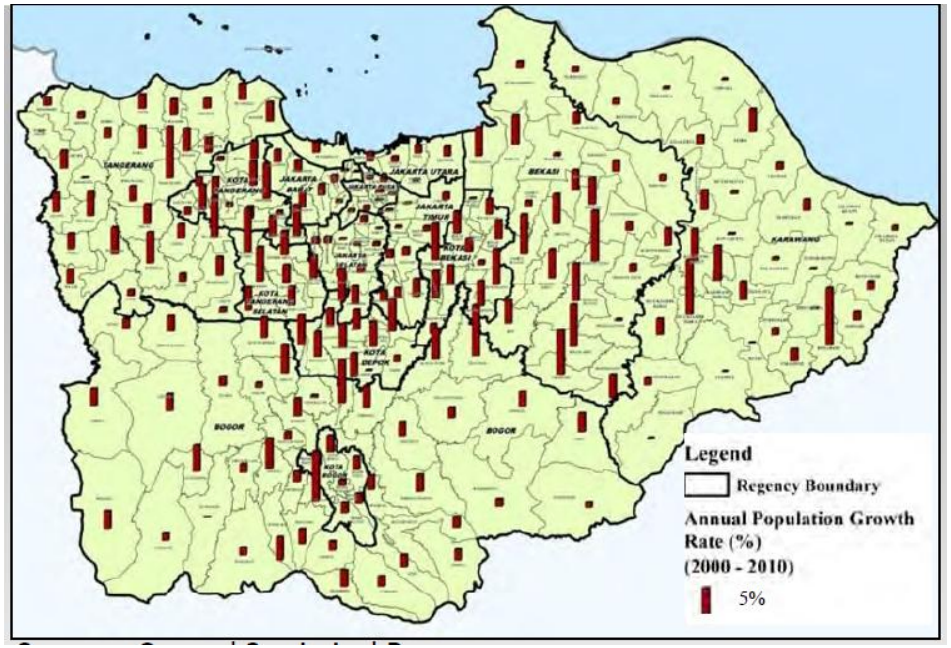
Urban issues in Indonesia (Population growth in the JABODETABEK)

While the population density is higher in Jakarta DKI, the growth rate is higher in neighboring cities. Population growth is expected to continue and the total population of JABODETABEK is expected to reach 70 million by 2035.

Population (thousand)	2000	2010	2015	Annual Growth	
				2000-2010	2010-2015
DKI Jakarta	8389.4	9640.4	10177.9	1.40%	1.09%
JABODETABEK (excl. DKI Jakarta)	14844.6	18351.4	21537.4	2.14%	3.25%





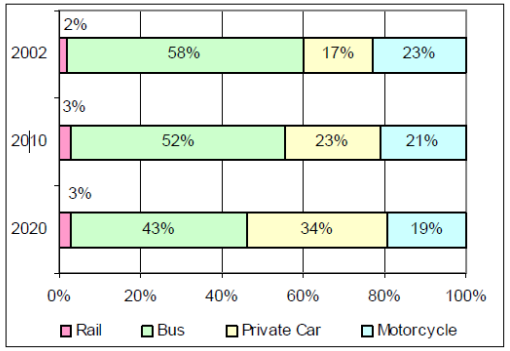
Urban issues in Indonesia (Congestion due to commuter traffic)

Traffic situation is rapidly worsening due to commuter traffic from JABODETABEK to central Jakarta. Without policy actions, the share of public transportation is expected to decrease.

Increasing commuter traffic in JABODETABEK

JICA, MPA Steering Committee

Expected modal share



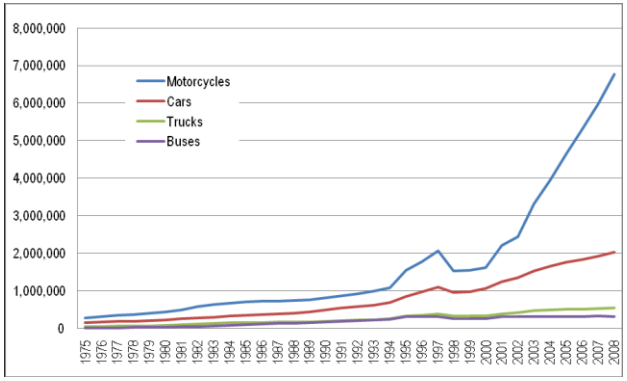
Increasing dependence on private cars (trend case)

JICA: The Study on Ithe ntegrated Transportation Master Plan (SITRAMP) for JABODETABEK (Phase 2) Final Report

Traffic congestion in Jakarta

JICA, JUTPI Investigation Report

Trend of the Vehicle Registration Number

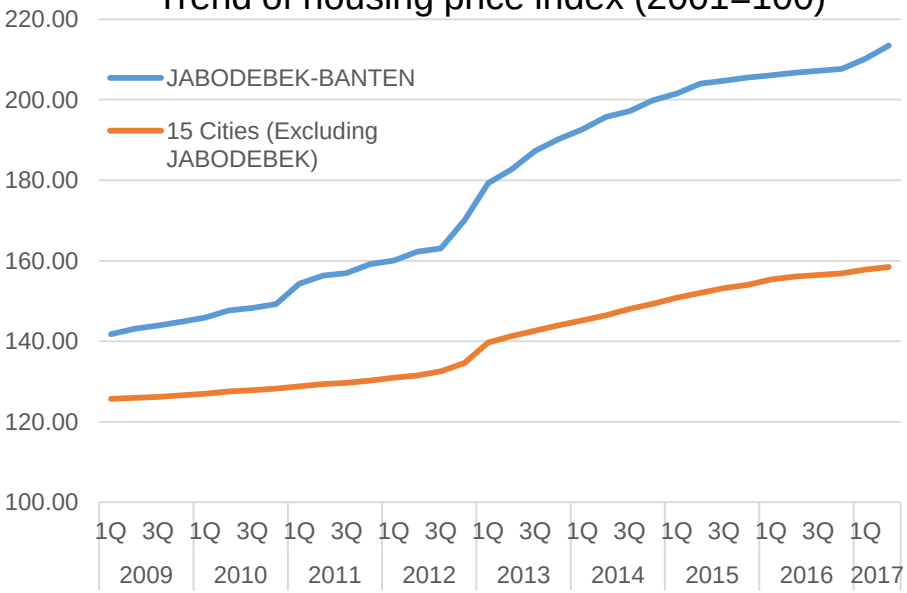


JICA, JUTPI Investigation Report

Housing issues in Indonesia (Supply of decent and affordable housing)

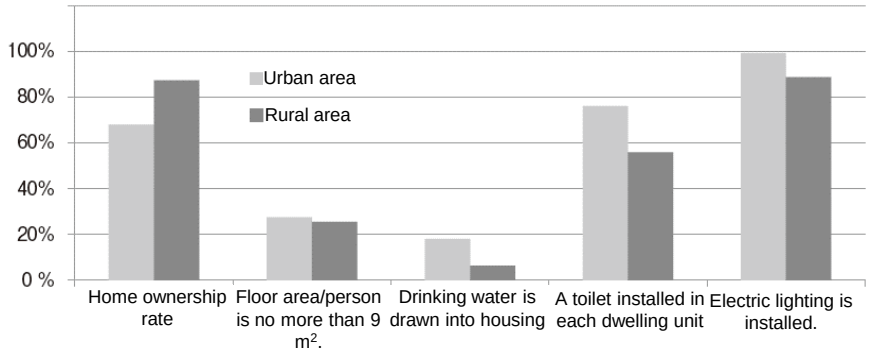
Housing supply for the increasing households is another issue in Indonesia.
The sharp rise in housing price / rent is prohibiting low- to middle-income households from acquiring decent housings.

Trend of housing price index (2001=100)



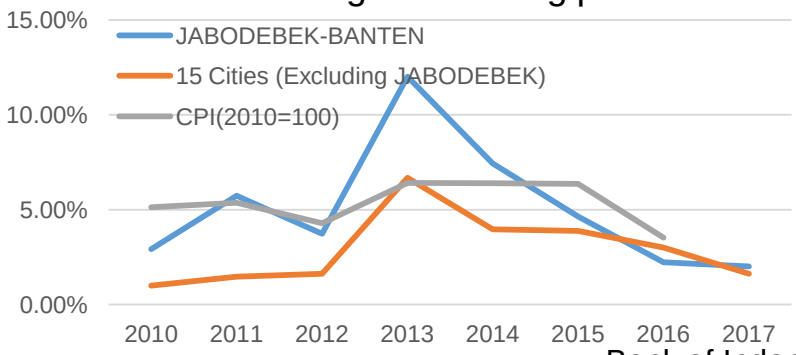
Bank of Indonesia

Living environment index (2010)



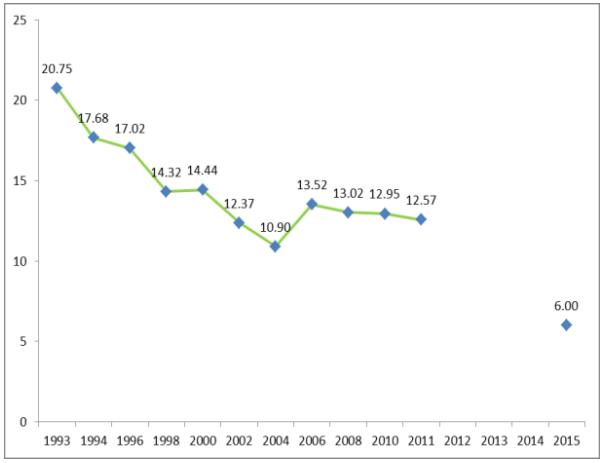
Source: 2010 Population Census (National Statistical Office)

Rate of change in housing price index



Bank of Indonesia

Trend of slum resident population



UNDP

Housing issues in Indonesia

Due to the serious shortage of housing supply, the national middle-term development plan was formulated under the direction of President Joko, in which housing development and slum area development are mentioned as key issues and are required to be addressed by the government as priority issues.

National middle-term development plan 2015-2019 (extracted)

HOUSING DEVELOPMENT

TARGET

- Facilitate the provision of decent and affordable housing for 2.2 million households using the government budget for reducing the residence shortage, especially in low- income communities.
- Encourage non-governmental and business community in the provision of proper housing for 2.2 million households to tackle housing shortages.
- Improve the quality of the uninhabitable house for 1.5 million households, including handling of slum area.

SETTLEMENT AREA DEVELOPMENT

TARGET

- Achieve the alleviation of urban slums to 0% through handling slum area covering 38,431ha and improvement of self-reliant communities in 7,683 villages
- Achieve drinking water service to 100% of Indonesian population
- Optimize the supply of drinking water and improve the efficiency of water service
- Increase the access to adequate sanitation to be 100 at the level of basic needs
- Increase the security and safety of buildings including environmental performance.

National Strategic Project： One Million Housing Program

Stage 1: Development of 603.516 houses for Low-Income Families
Stage 2: Development of 98.020 Units
Stage 3: Development of 173.803 Units

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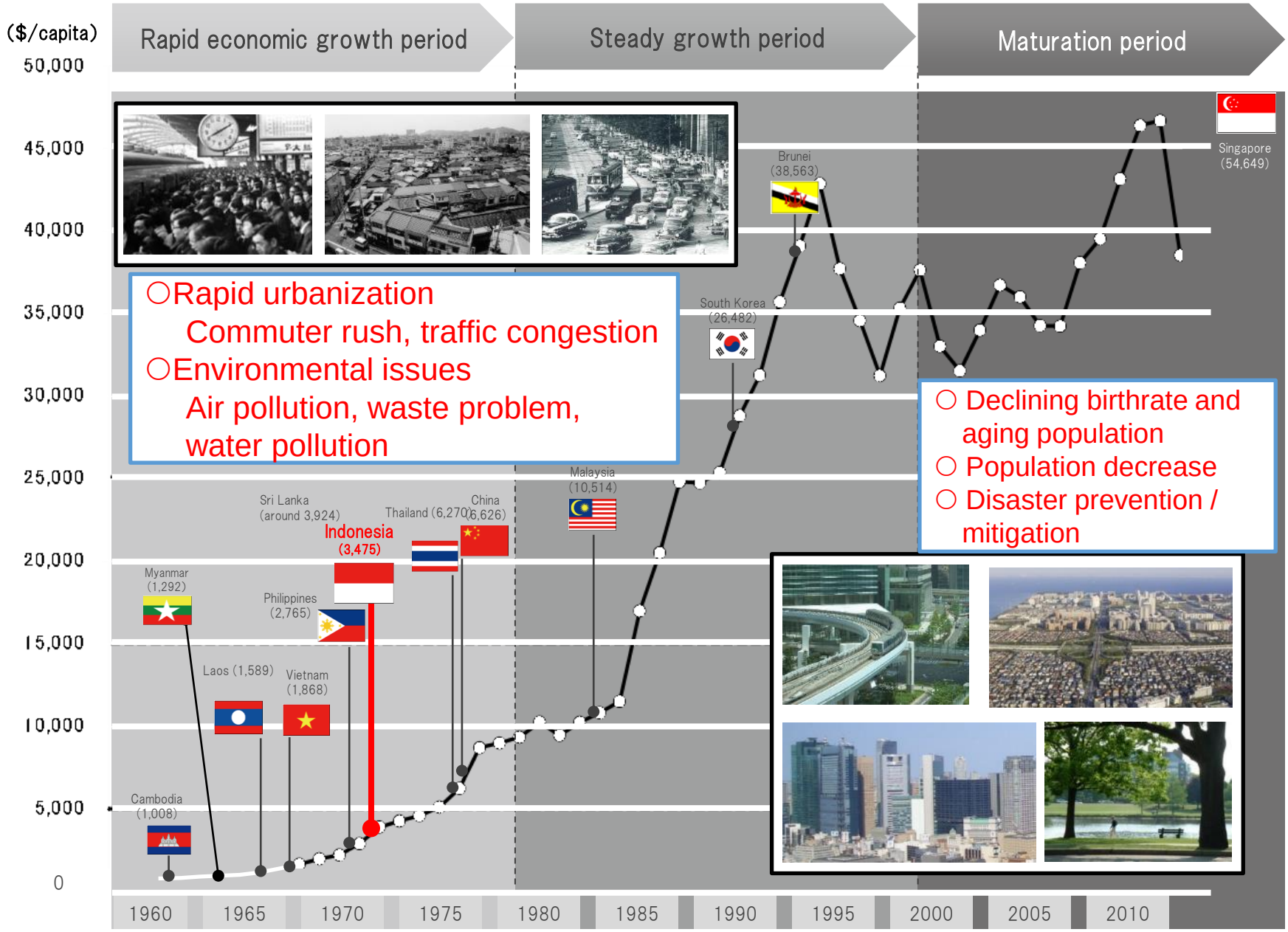
Urban development challenges: Japan's experience



Japan's Experiences in Urban Development

Rapid economic growth period

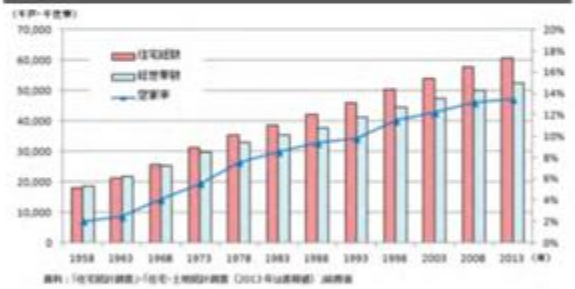
1. Decentralization of urban function

Functional distribution in Tokyo Metropolitan Area

1950's	1960's-1970's	1980's-90's
Post-war concentration of population on central Tokyo	Relocation of factories, universities, and new towns to suburban areas.	Realization of multi-core city structure The 3rd National Capital Region Development Plan (1976) The 4th National Capital Region Development Plan (1986)

2. Provision of a large amount of residences

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

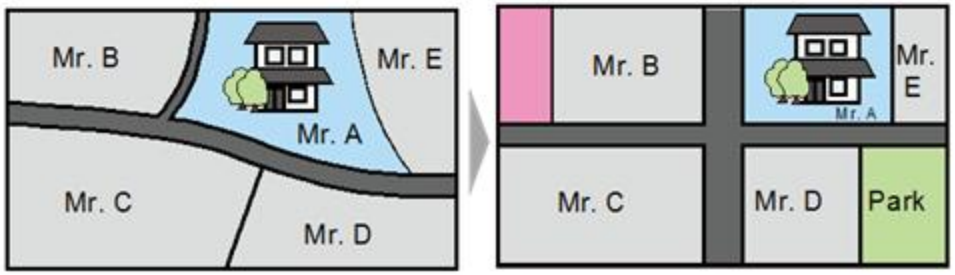


Three housing policies

- **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

Image of rezoning



Japan's Experiences in Urban Development

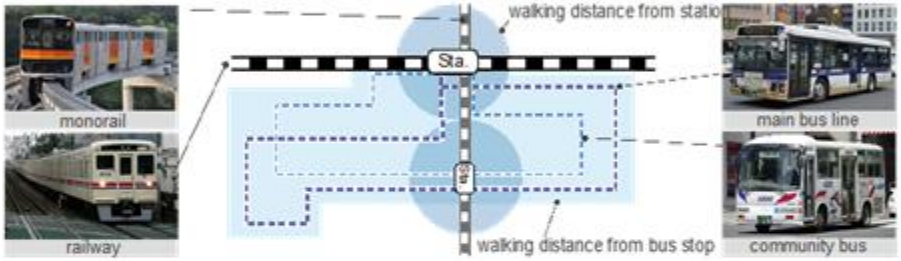
Steady growth period

4. Improvement of the quality of housing

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. Natural Resources Conservation

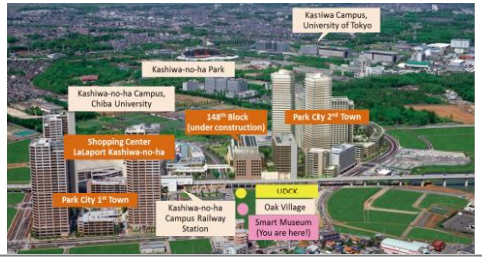
Introduction of resource recycling equipment (ex. Roppongi Hills)

Japan's Experiences in Urban Development

Maturation period

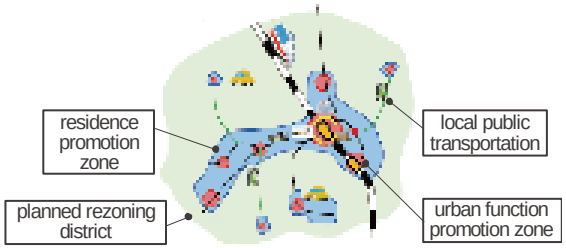
8. Development of Smart City

Smart city realization in Kashiwa-no-ha Campus City



9. Promotion of compact + network city

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.

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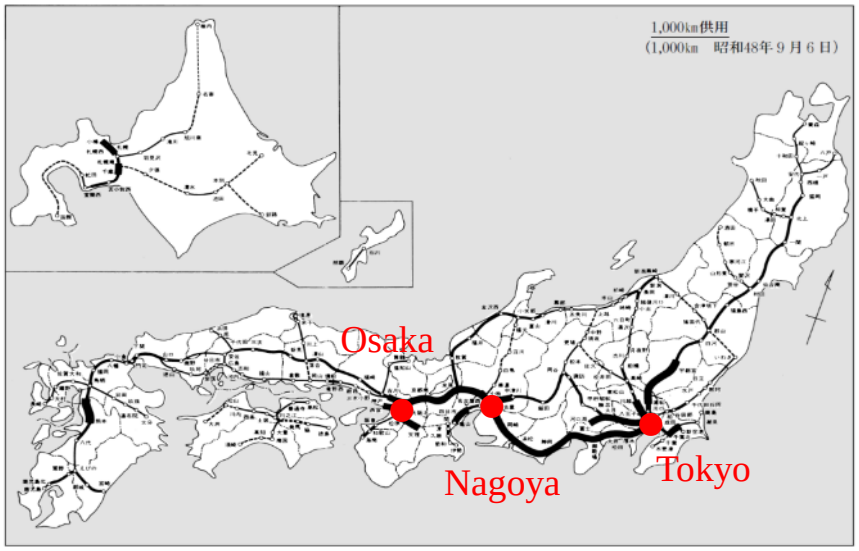
Japanese Expressway: The History

- 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)

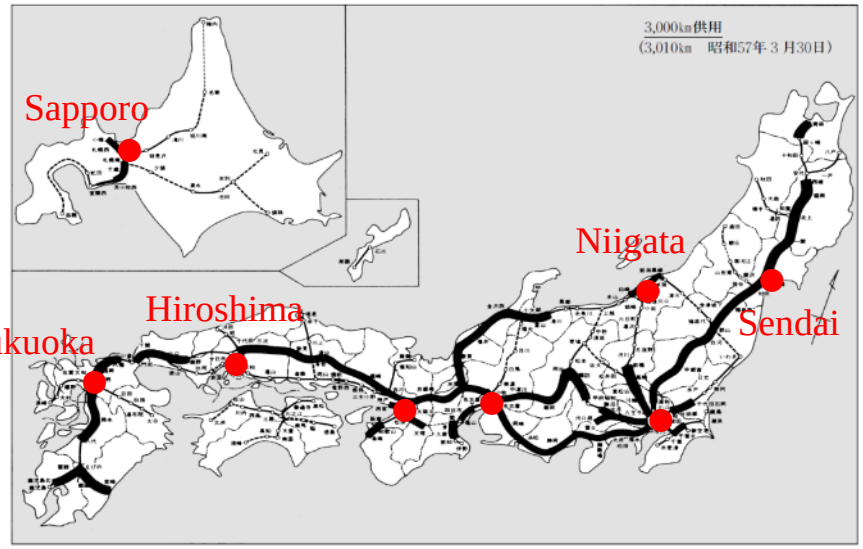
Photo: NEXCO-West

National Expressway Network Development

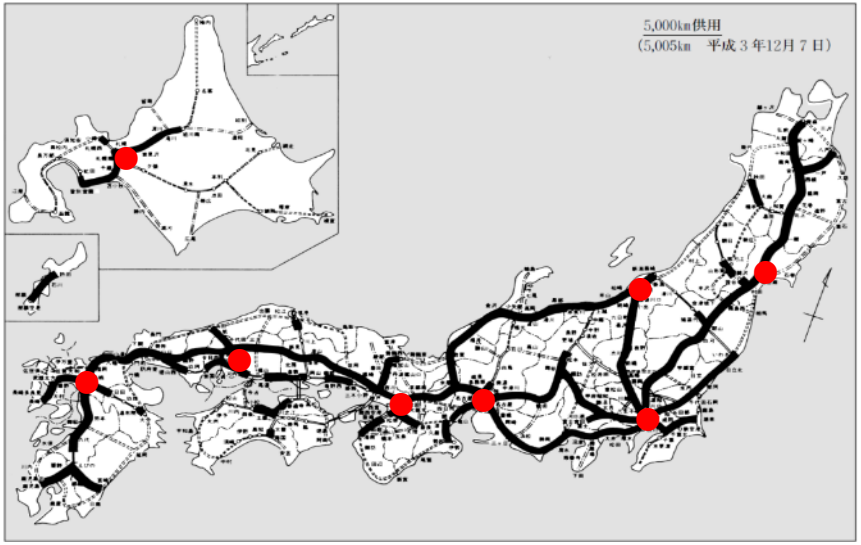
1,000km in service （Sept, 1973）



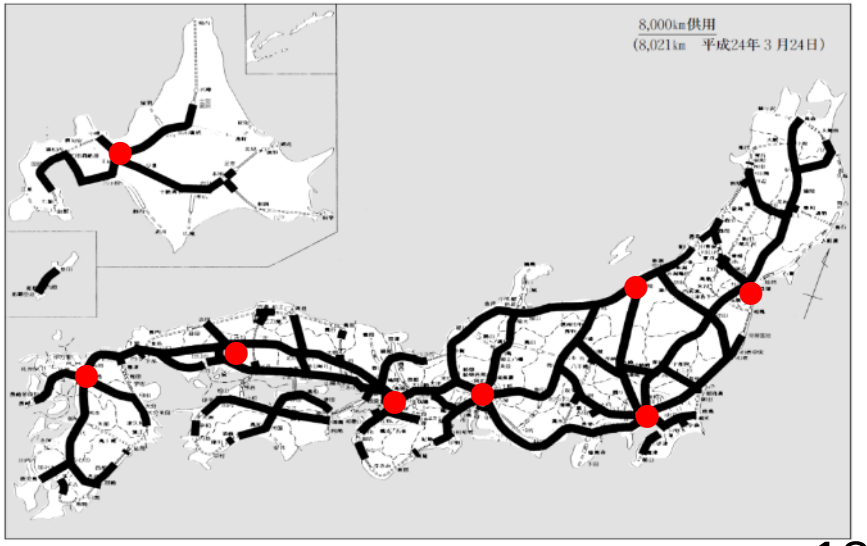
3,000km in service （Mar, 1982）



5,000km in service （Dec, 1991）

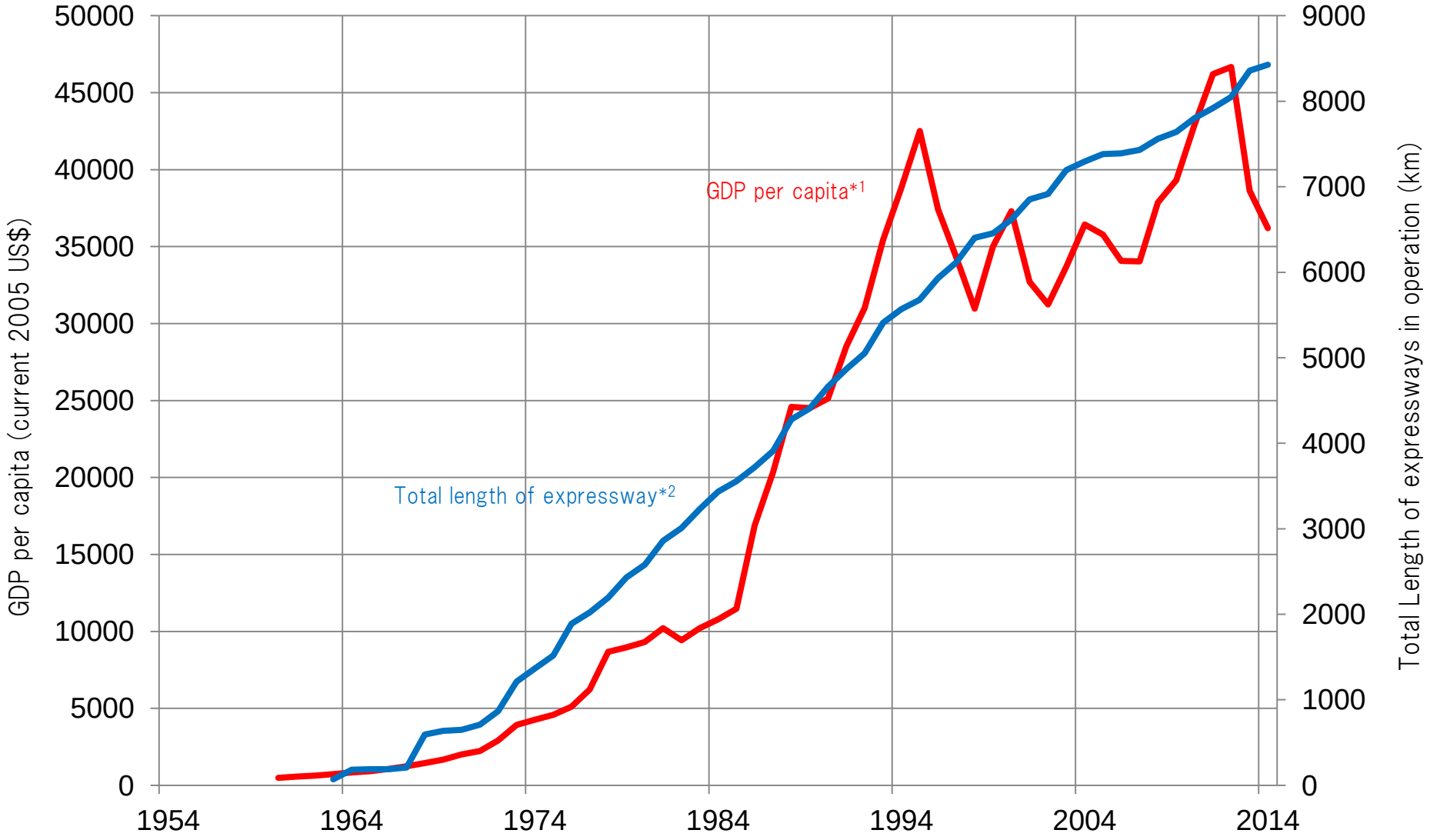


8,000km in service （Mar, 2012）



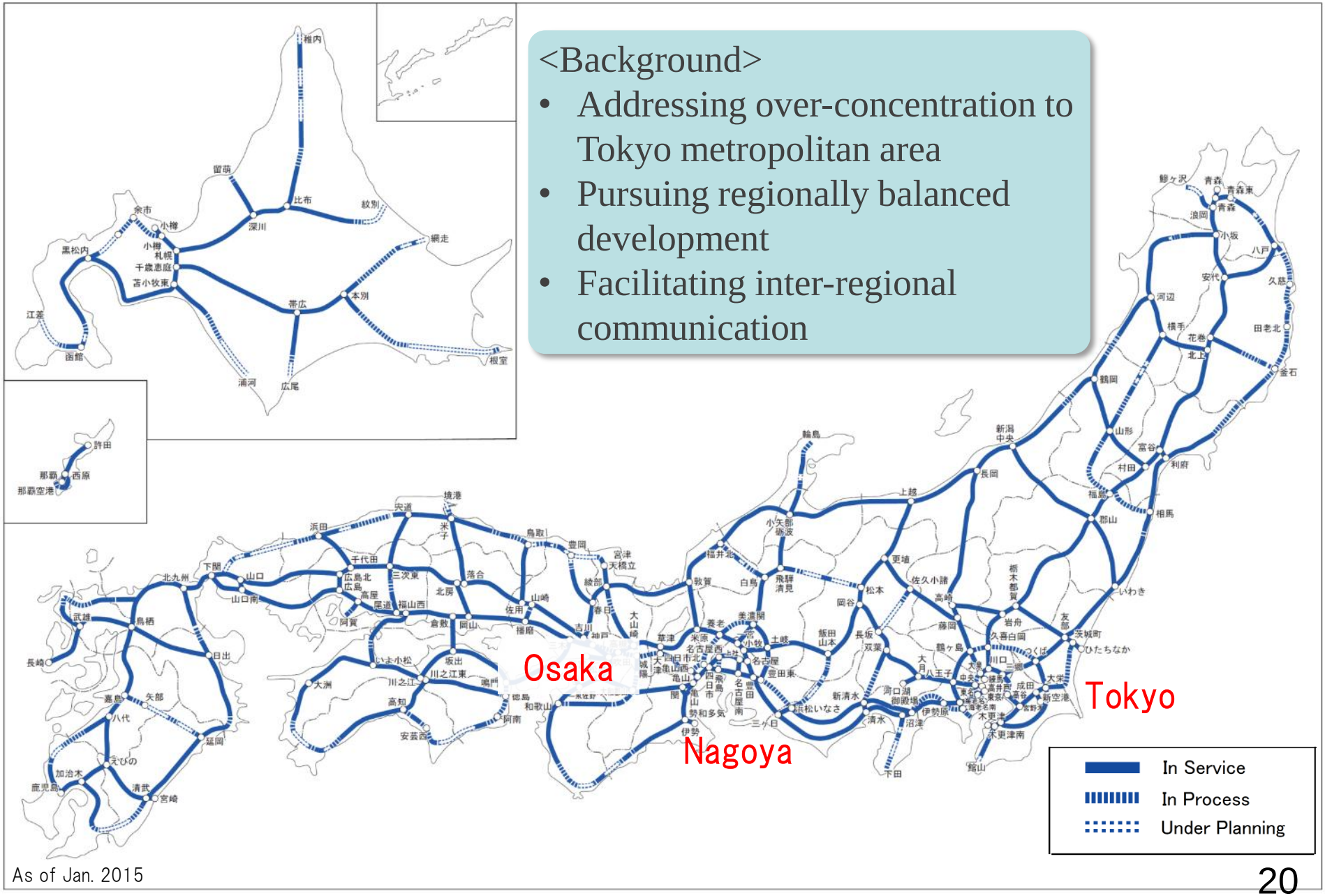
※ excluding the motorway of national highway

Change in the length of expressways and real GDP



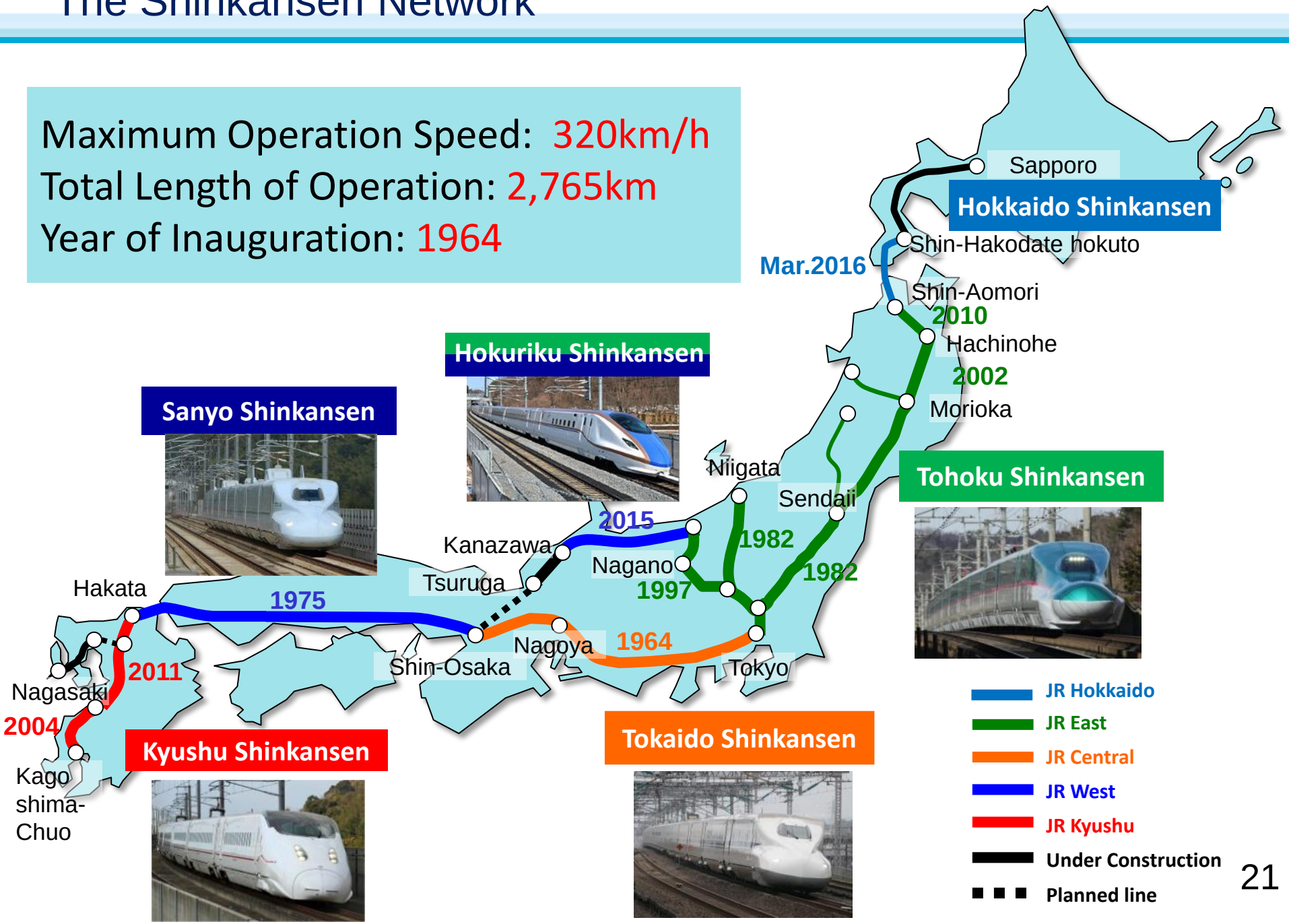
Note:
*1: Current US$, data from the World Bank "World Development Indicators" at http://data.worldbank.org/country/japan
*2: Data from MLIT "Annual Road Statistics 2015" at http://www.mlit.go.jp/road/ir/ir-data/tokei-nen/2015/nenpo02.html

Current Expressway Network Plan (14,000km)



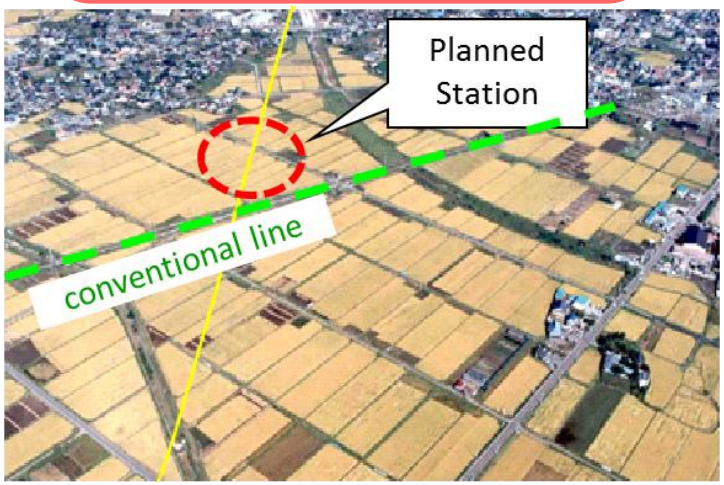
The Shinkansen Network

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



The impact of Shinkansen on regional development

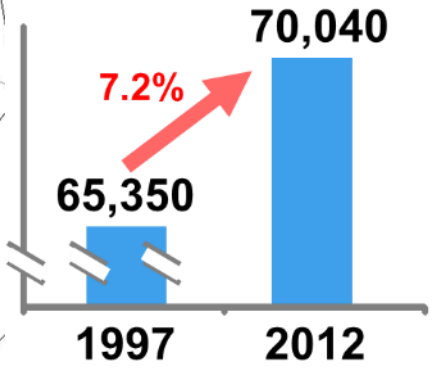
Before(1997)



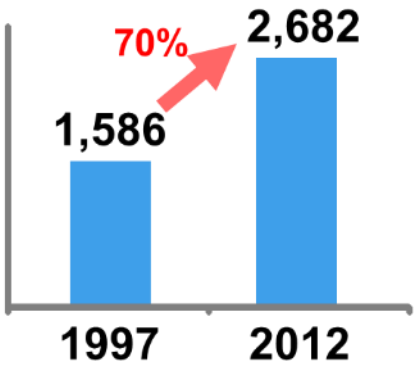
After(2012)

Tokyo = Sakudaira: 165km
Before Shinkansen Opening: 3'30"
After Shinkansen Opening: 1'20"

Population (Saku City)

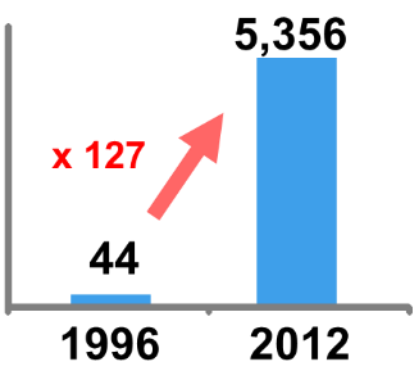


Passengers (Sakudaira Sta.)



Asset tax revenue (around Sakudaira Sta.)

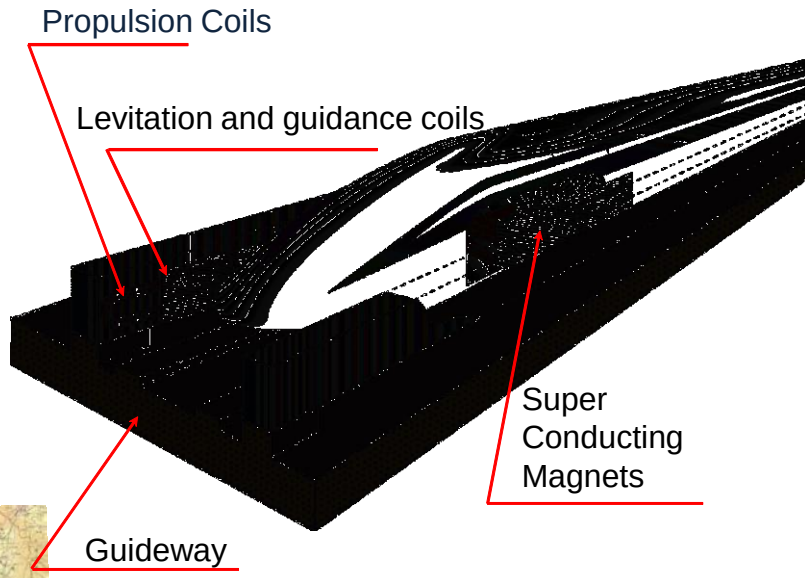
$ thousand



Super-conducting Maglev System

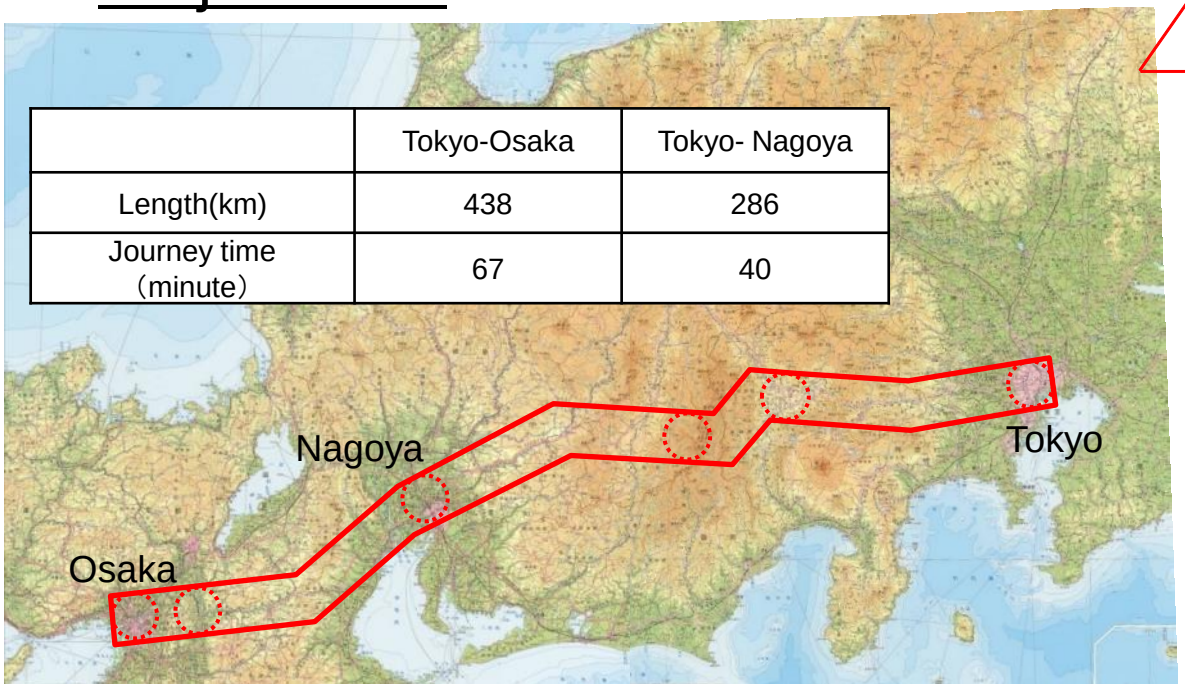
➢ Project Outline

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



➢ Project Area

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

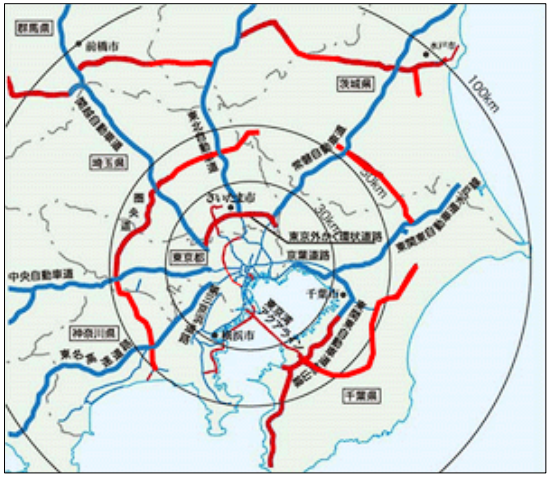


Experimental Train at Test Track

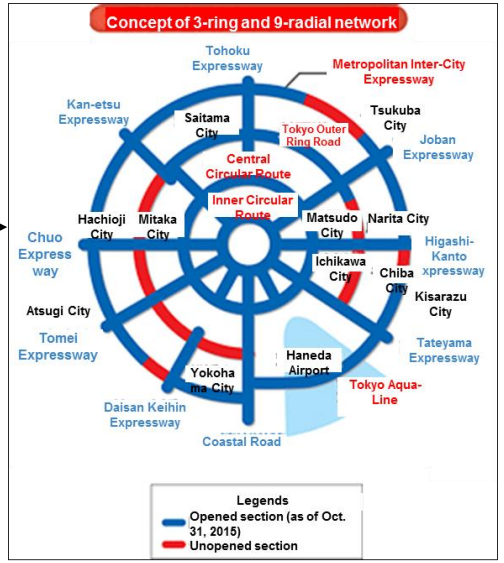
Highway Network Development in Metropolitan Area

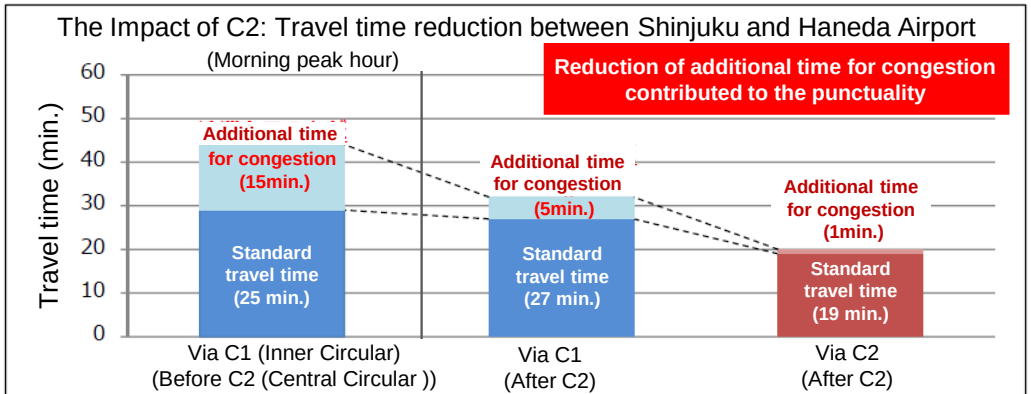
In 1963, a traffic network of 3 rings roads (Central Circular Route (C2), Tokyo Outer Ring Road, and Metropolitan Inter-City Expressway) and 9 radials was planned as the basic structure of road traffic in the Metropolitan Area, but delay in development of ring roads has been causing traffic congestion.
Three ring road projects are currently promoted to solve the traffic congestion in central Tokyo.

The Network in 1990



As of Oct. 31, 2015





Development of Railway Network in Tokyo Area

1950

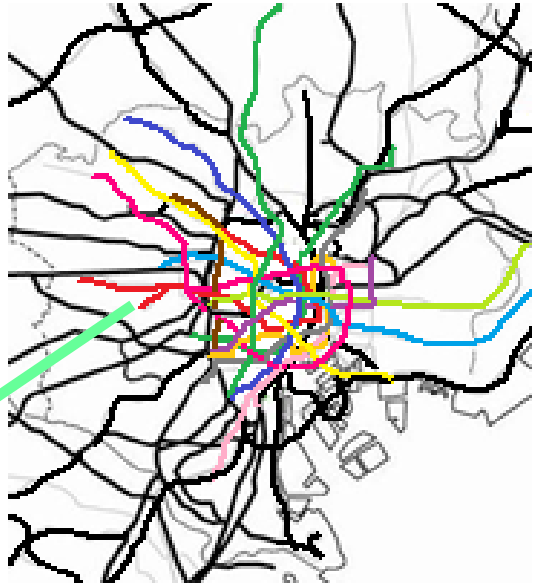
Railway	
Total Length (km)	1,478 (100)
Passengers Carried (million/year)	2,258 (100)

2000

Railway	
Total 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

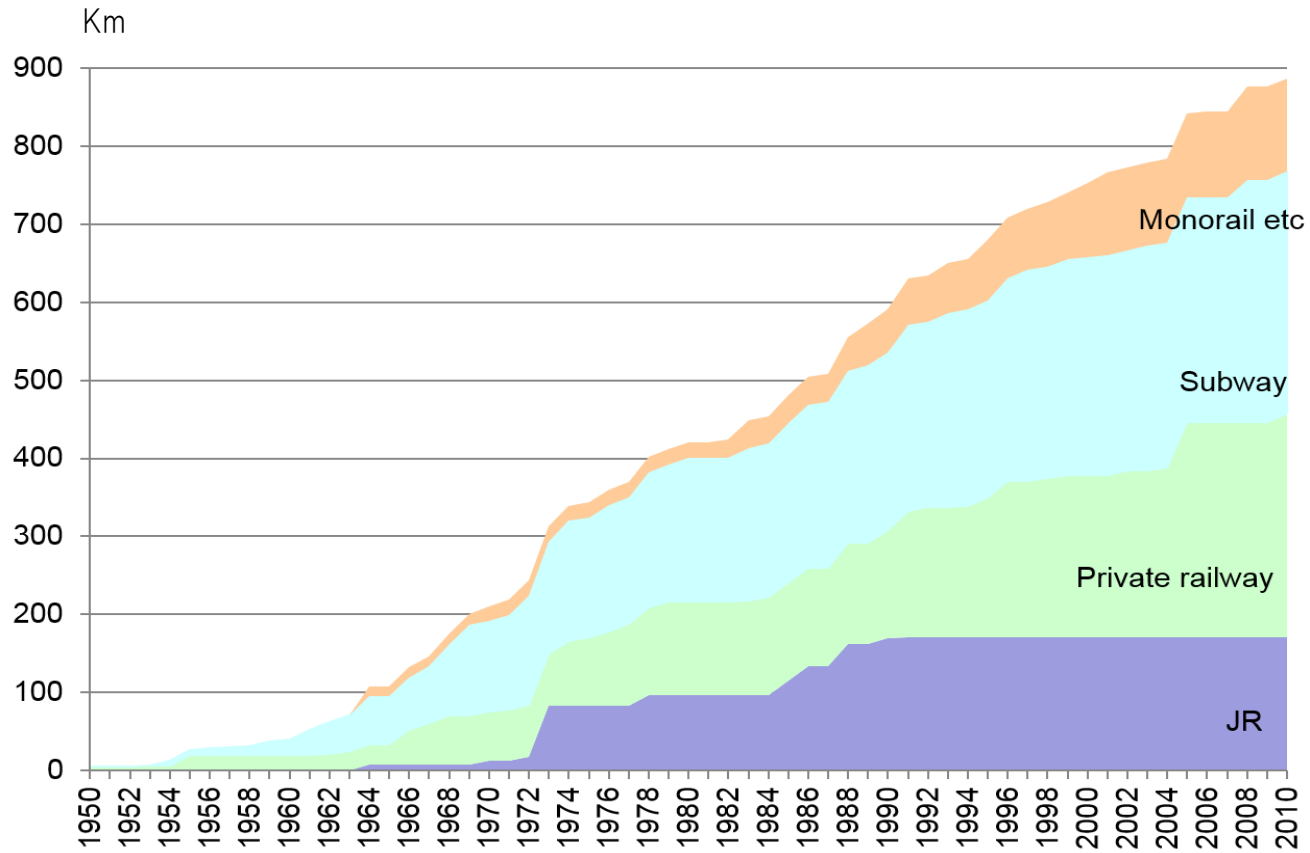


Subway
(300km)

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(Automated Guideway Transit) connects
Tokyo City Center and Tokyo Waterfront City

【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)

IC Cards in public transportation

Over 90%

IC card use rate in Tokyo area

Touch & Go

(0.2 sec.)

More than 2 IC cards per person

(*total issue: 320 million*)

Accepted in 2.6million shops

including convenience stores and cafes allover Japan

source：JR East, Felica Networks co. ltd.

Introduction of IC Cards by Railway Companies

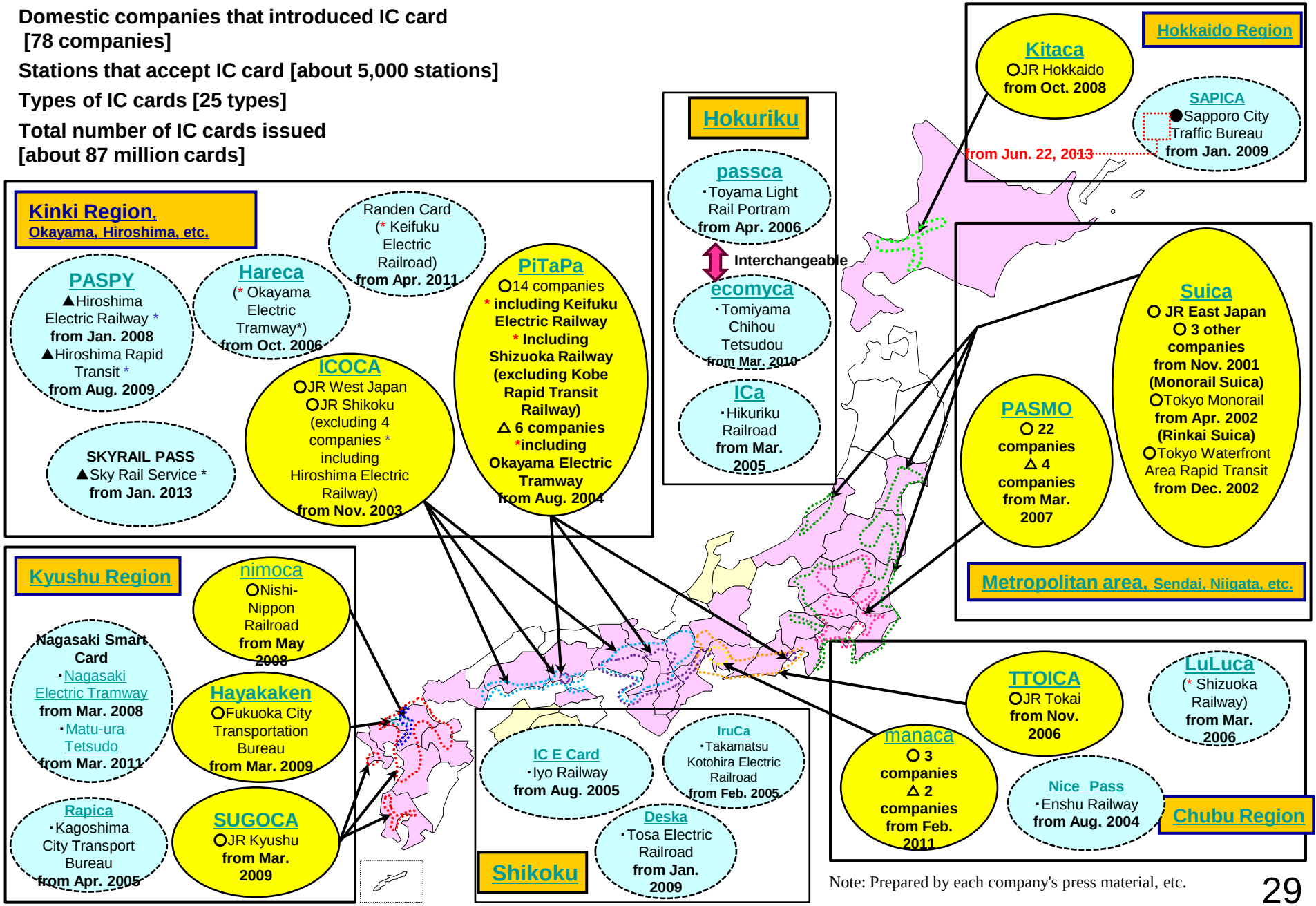
(as of the end of March 2013)

Domestic companies that introduced IC card [78 companies]

Stations that accept IC card [about 5,000 stations]

Types of IC cards [25 types]

Total number of IC cards issued [about 87 million cards]



Note: Prepared by each company's press material, etc.

Access to Tokyo International (Haneda) Airport : Tokyo Monorail

Monorail connects Haneda Airport
And Tokyo City Center

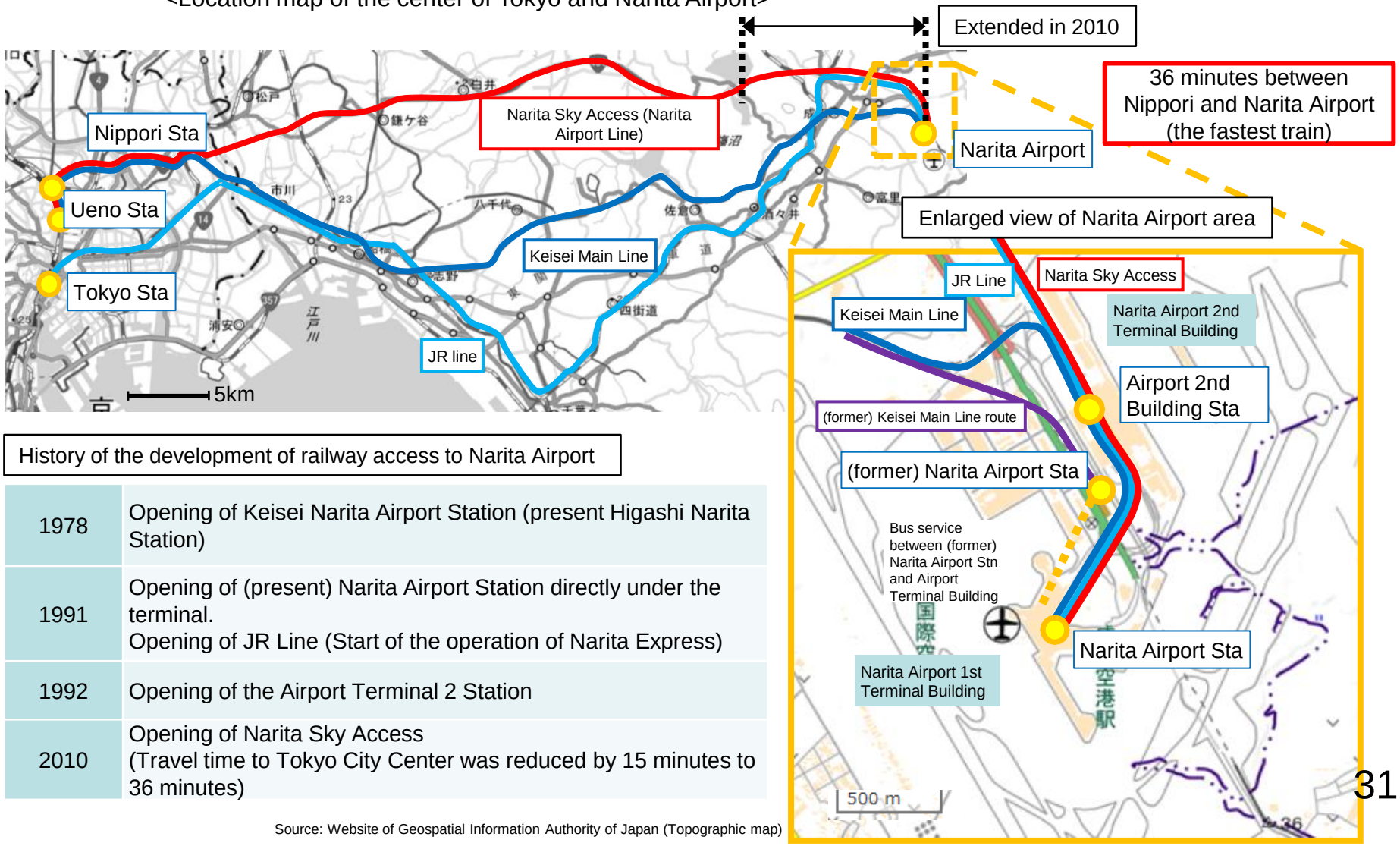
【Tokyo Monorail】

- 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

Airport Access (New Tokyo International (Narita) Airport)

Railway access to Narita Airport has been gradually developed since the opening of the airport in 1978: the direct access to the terminal building by JR / Keisei in 1991, the opening of Terminal 2 Station in 1992, and the opening of Narita Sky Access in 2010.

<Location map of the center of Tokyo and Narita Airport>



History of the development of railway access to Narita Airport

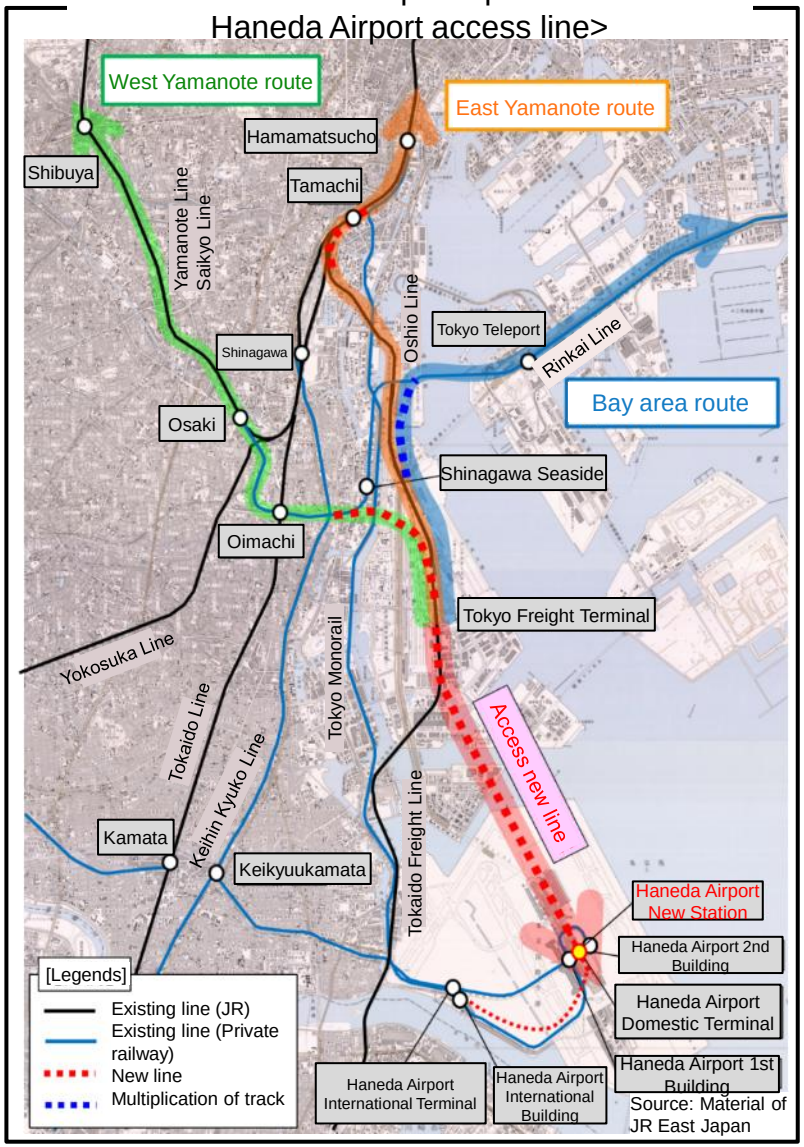
1978	Opening of Keisei Narita Airport Station (present Higashi Narita Station)
1991	Opening of (present) Narita Airport Station directly under the terminal. Opening of JR Line (Start of the operation of Narita Express)
1992	Opening of the Airport Terminal 2 Station
2010	Opening of Narita Sky Access (Travel time to Tokyo City Center was reduced by 15 minutes to 36 minutes)

Source: Website of Geospatial Information Authority of Japan (Topographic map)

New Railway Projects to Improve Airport Access

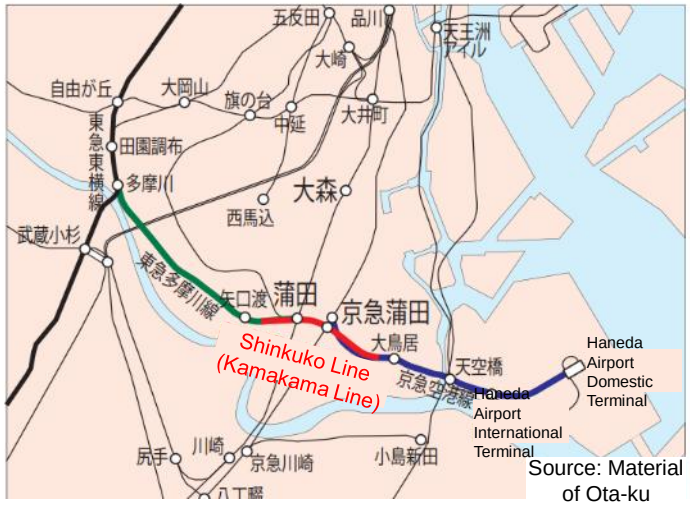
New railway projects to improve the access between airports and the metropolitan area are under consideration.

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



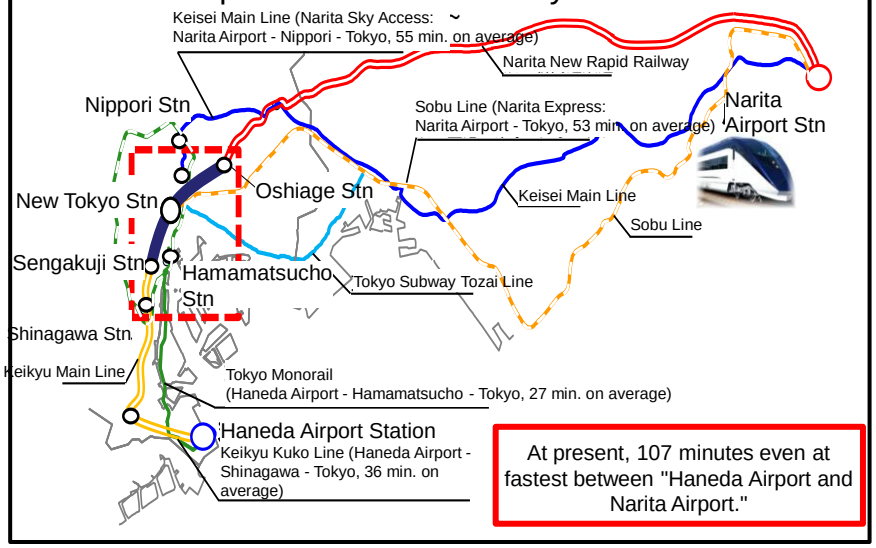
Source: Material of JR East Japan

<The plan for New Airport Line (Kama-Kama Kine)>



Source: Material of Ota-ku

<The plan for the Central Tokyo Direct Line>



At present, 107 minutes even at fastest between "Haneda Airport and Narita Airport."

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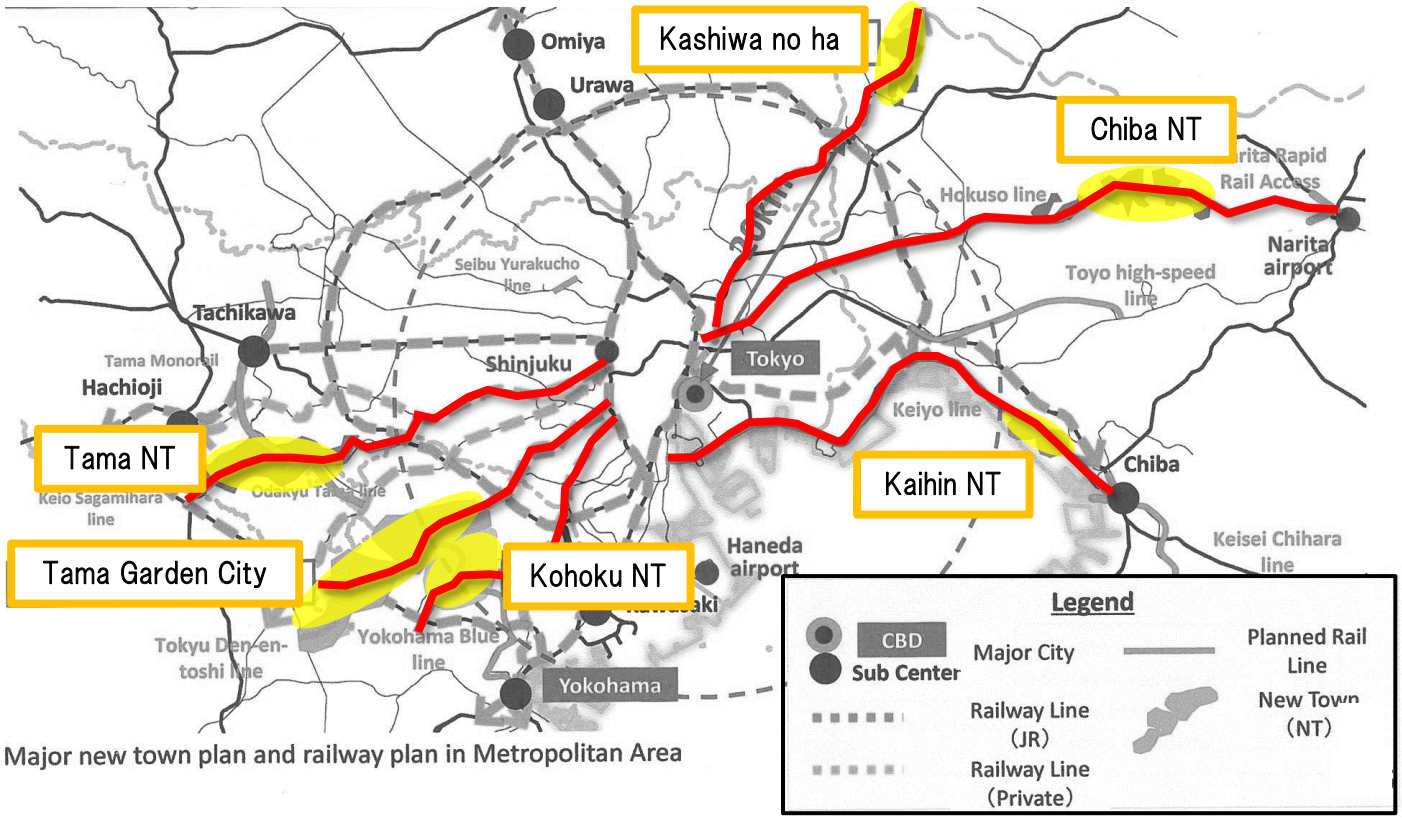
Enhancement of public transportation and New Town Development

— Induction of new town development in Tokyo Metropolitan Area —

To meet the housing demand for growing urban population, large-scale suburban new town development projects were conducted in conjunction with urban railway development, such as Tama NT, Tama Garden City, Chiba NT, Kohoku NT, Kaihin NT, and Kashiwa no Ha. (Transit Oriented Urban Development)



Major new town plan and railway plan in Metropolitan Area

Transit Oriented Development (TOD) in Suburbs: Tama New Town

- A large scale urban development by public entities (incl. Urban Renaissance, Tokyo Metropolitan government).
- Direct connection to central Tokyo by the extension of two private railway lines
- Connection to Tachikawa City by newly constructed Tama Monorail

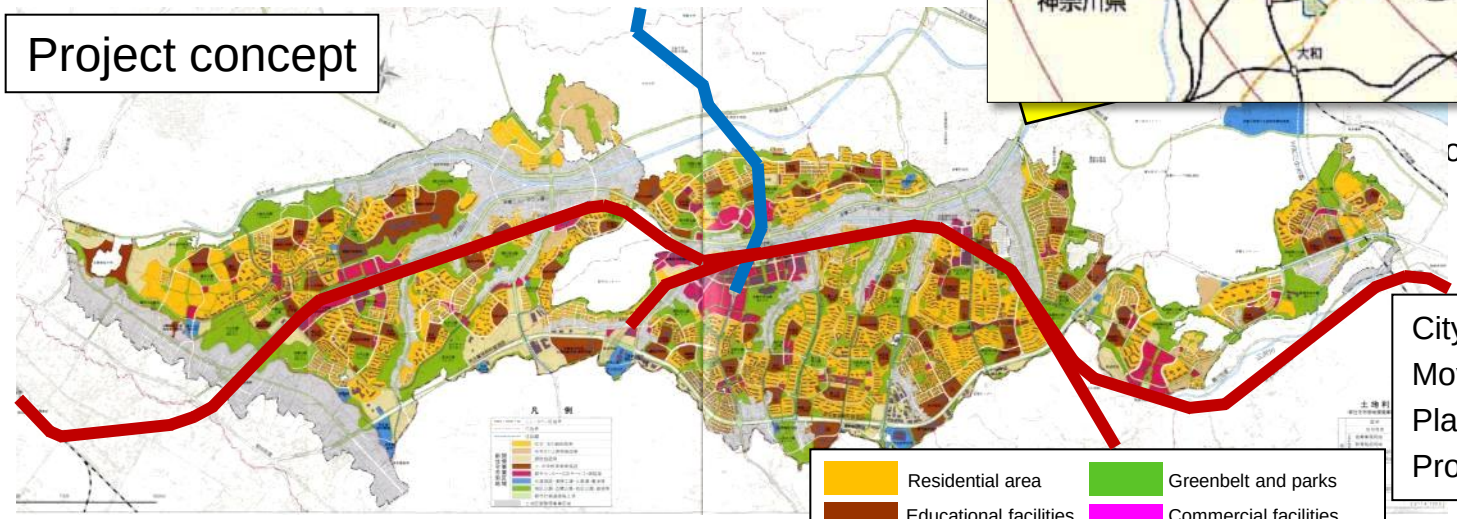
Development of Tama New Town

Urban railway

Monorail

Location map

Project concept



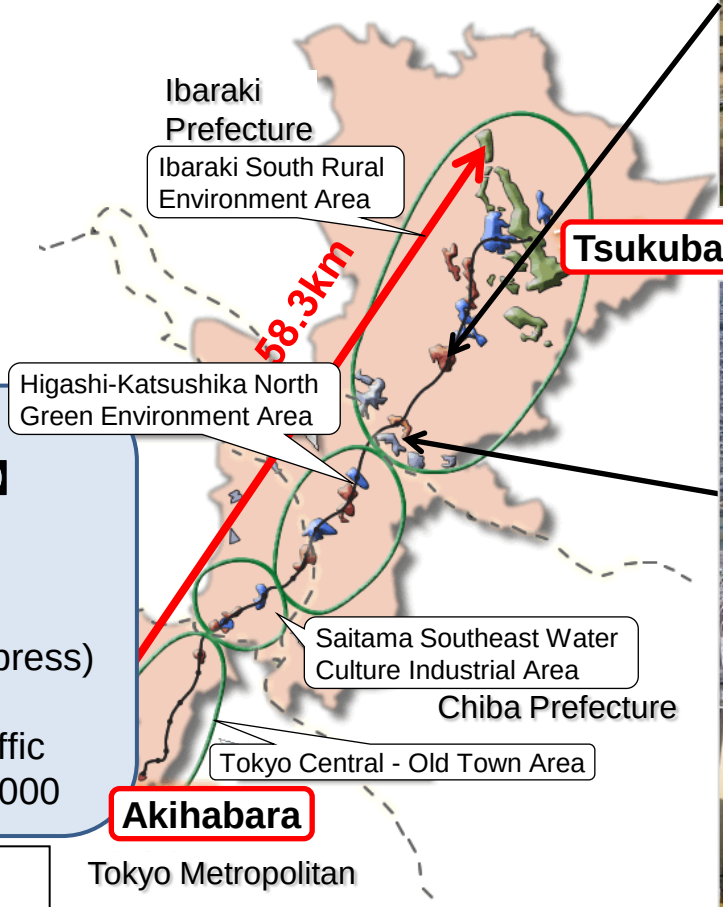
Source: Materials submitted by UR

ource: 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

TOD in Suburbs: Tsukuba Express

Urban development along the development of urban railway line



【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**

TOD in City Center: Shinjuku Station

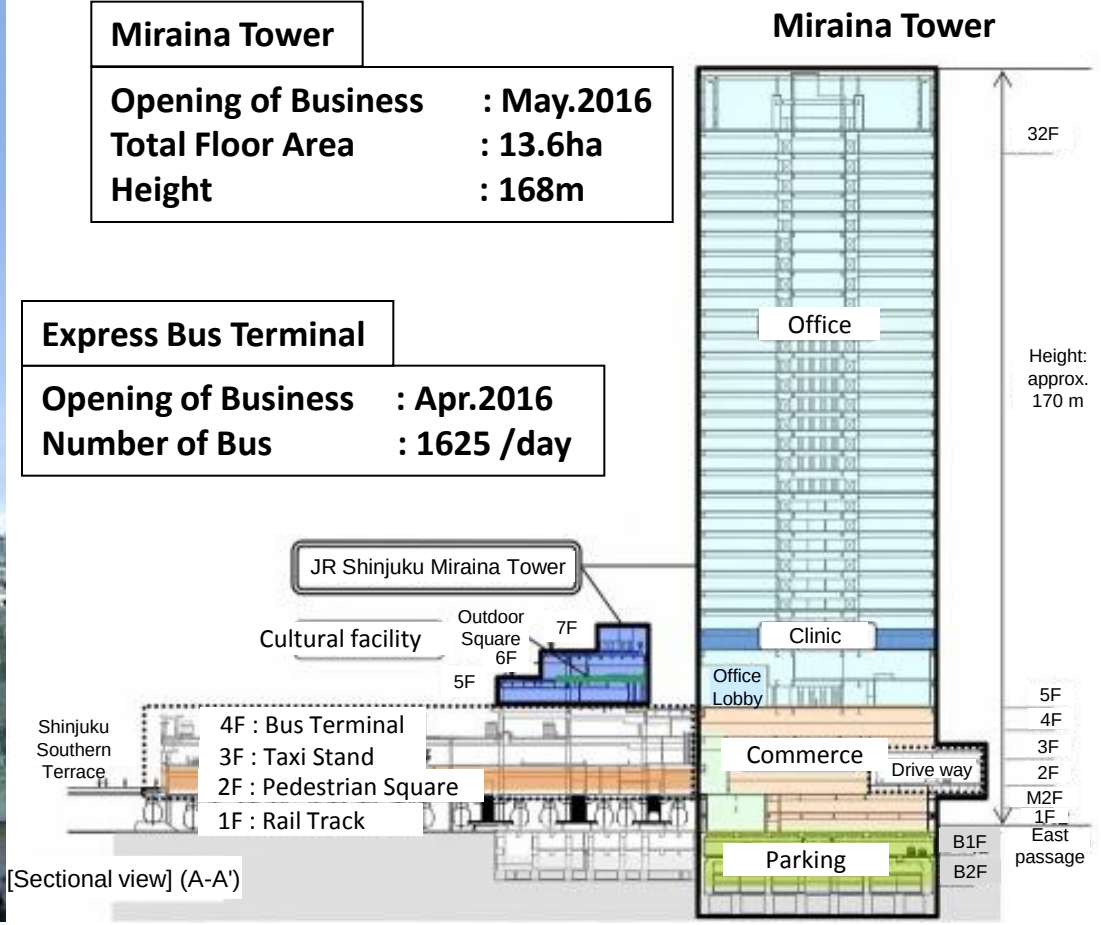
- Developed pedestrian square, bus terminal, taxi stand, the commercial and office buildings on artificial foundation(1.47ha) over rail tracks
- Integrated development of station facilities and public facilities (collaboration of public and private sectors)

Miraina Tower

Opening of Business	**: May.2016**
Total Floor Area	**: 13.6ha**
Height	**: 168m**

Express Bus Terminal

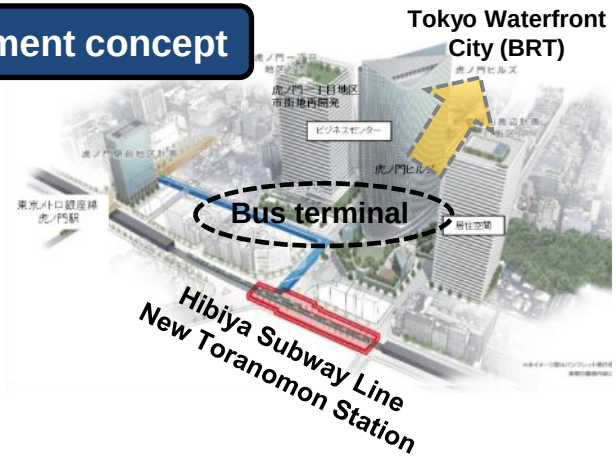
Opening of Business	**: Apr.2016**
Number of Bus	**: 1625 /day**



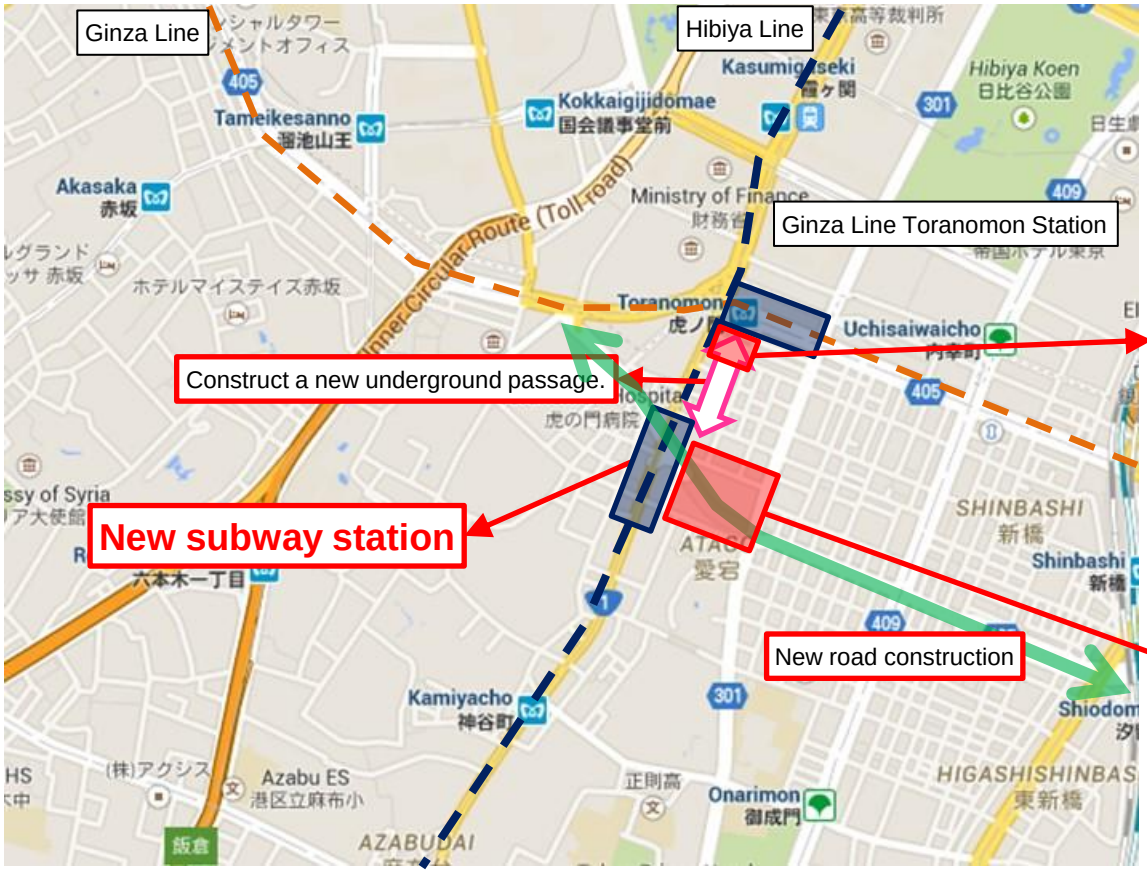
TOD in City Center (New Toranomon Station (projected))

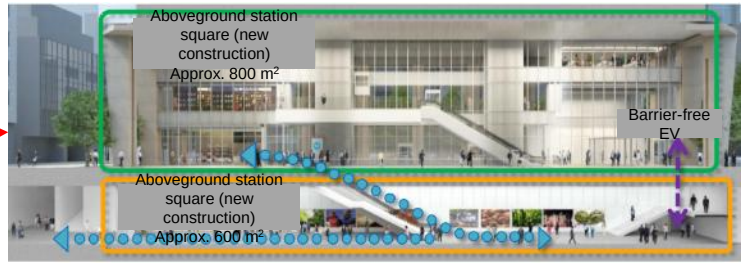
- A redevelopment project to building a super high-rise tower, using the space above the underpassing new road.
- Creating a comfortable underground station square in conjunction with the new subway station, utilizing existing underground passages and private land.

Development concept



Develop a bus terminal and a connecting new subway station.





Development of a underground station square

Toranomon Hills

Utilization of Bus Rapid Transit in Tokyo

- Further enhance the convenience of public transportation aiming to create the world-level business / residential area and invite international investment and human resources.
- To this end, develop a convenient and easy-to-use transit terminal and introduce BRT (Bus Rapid Transit), a rapid transit system with high punctuality and rapidity

Toranomon area

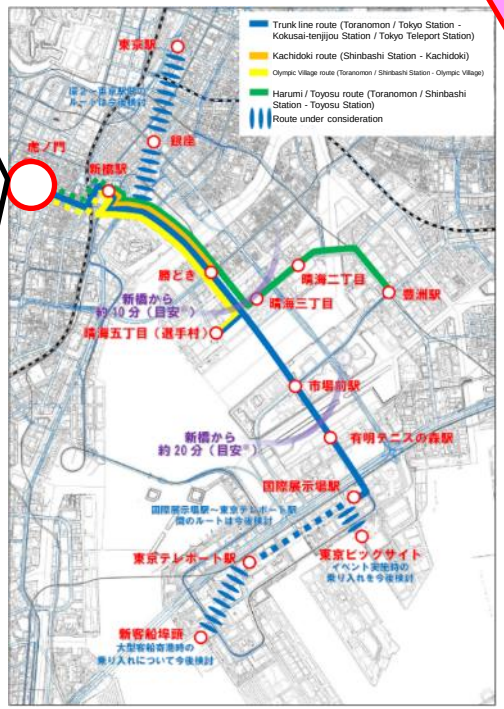
Image of Toranomon Bus Terminal

Image of New Toranomon Station on the subway Hibiya Line

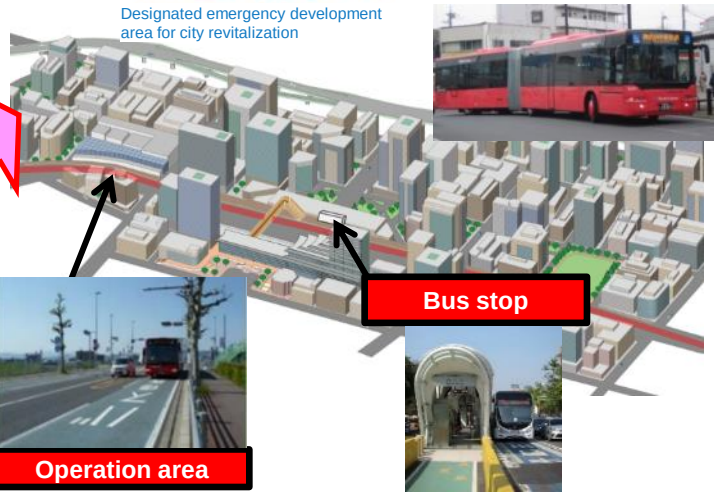
Tokyo Waterfront City (BRT)

Develop a bus terminal and connecting new subway station

BRT operation route connecting between central Tokyo and Waterfront Subcenter



Development of operating areas, bus stops, etc.



○ 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.

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Urban redevelopment project (Hikifune Station area, Sumida, Tokyo)

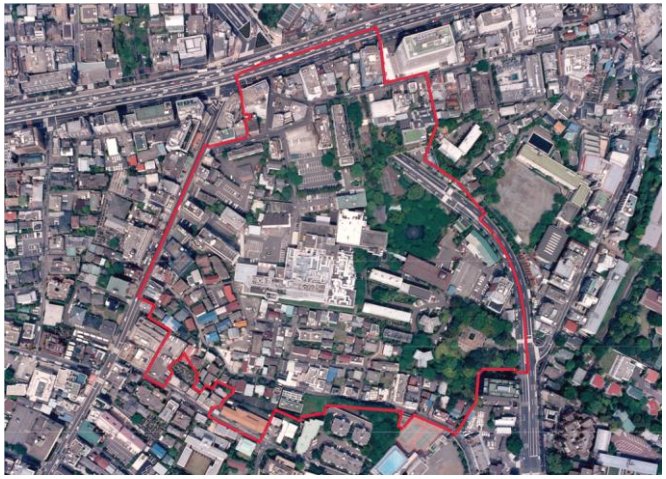
- A development project aiming at Disaster prevention and sound and optimal land use in the densely built-up areas. The objectives of project include:
  - ✓ Improvement of the disaster preparedness in the area concentrated with old wooden housings.
  - ✓ Securing open space by intensive land use
  - ✓ Supplying highly convenient urban housing, taking advantage of the location near the station.

Before Redevelopment

Urban redevelopment project (Roppongi 6-chome area)

- One of the largest-scale redevelopment project by the private sector using 11ha of land, involving 374 landowners, costing 290 billion yen (= 2.9 billion USD).
- Large-scale reorganization of unutilized or underutilized land and adjunct areas where wooden housing is concentrated.
- Created a new urban center directly connected to Roppongi Subway Station (Hibiya Line) by developing the complex of various functions including residence, business, commerce, media, hotel, and art and culture.

Before Development



After Development

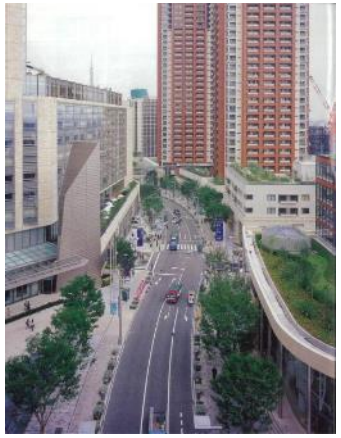


Photo: Mori Building

Redevelopment of Tokyo Station Area (Intensive land use through transfer of FAR)

- In the preservation and restoration of Tokyo Station Building, Marunouchi area realized intensive land use through bonus FAR rate transferred from station area.
- At the same time, Gyoko Street has been redeveloped to create a dignified space suitable for the gate of the capital city, Tokyo.

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Strength of Japanese Cities: Smart city

Next-generation town incorporating various elements

- A comfortable and sustainable city where with IT and other technologies are used to solve various challenges in the city, such as traffic, energy, health, and community development.
- Other technologies are also introduced such as energy storage systems for emergency response and resource recycling systems.

Smart city

Energy saving

Safety and security

Resource recycling

Symbiosis with nature

Town management

and more・・・

Symbiosis with nature

- Creating urban space harmonized with water and greenery

Energy saving

- Reducing energy use in a building / block level through both passive and active energy control.
- Utilize renewable energy, such as solar and wind power.

Safety and security

- Develop a disaster-resistant town / local community.
- Secure emergency generators, warehouses, evacuation area

Resource recycling

- Storing/ utilizing rainwater.
- Recycling treated wastewater (middlewater) for plants watering, etc.

Example of Smart city (Kashiwanoha, Chiba)

- Energy management at district level through integration of "energy generation", "energy saving", and "energy storage."
- Optimizing the energy use at district level through AEMS (Automated Equipment Monitoring System) and HEMS / BEMS for individual housing units / buildings.

* Source: Mitsui Fudosan website

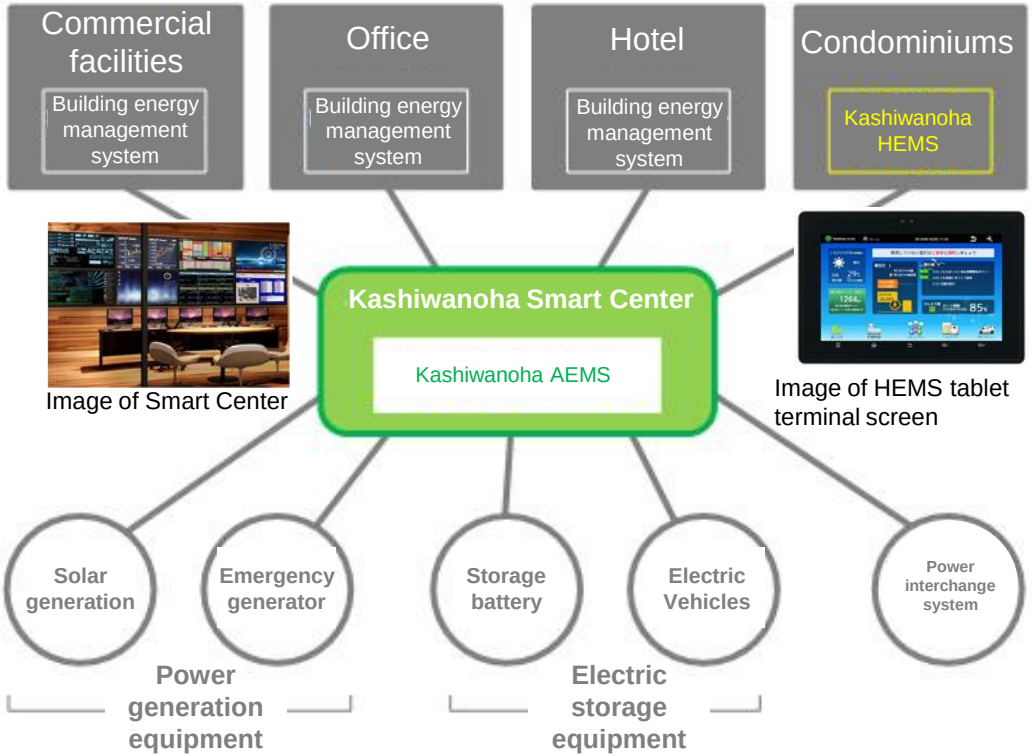


Image of Smart Center

Image of HEMS tablet terminal screen

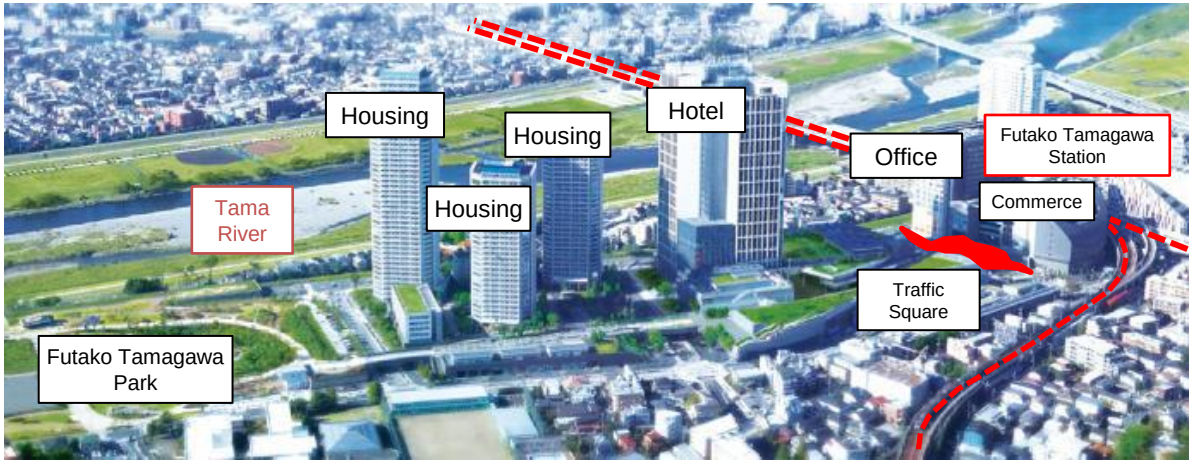
Solar generation

Emergency generator

Electric Vehicles

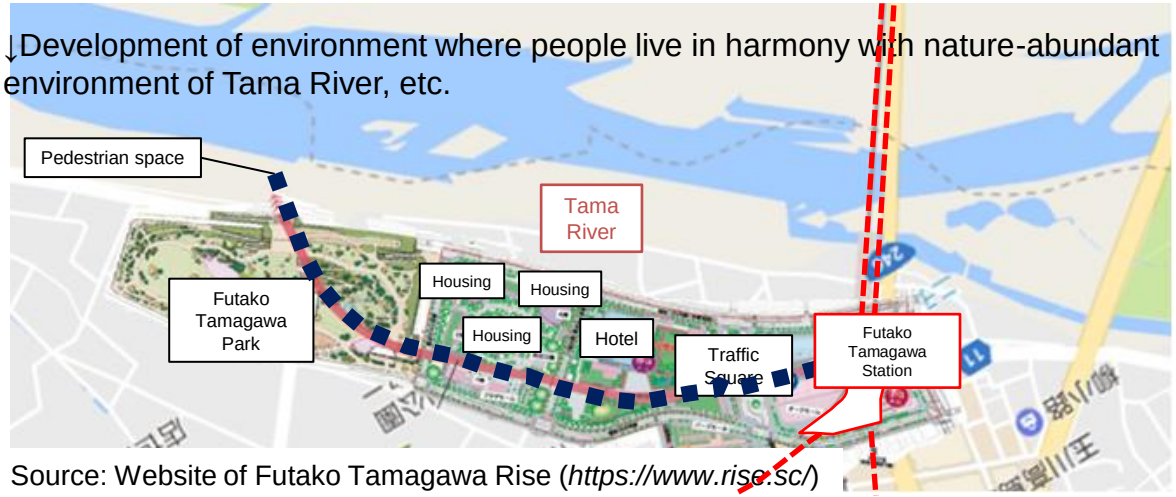
Example of Smart city (Futako Tamagawa Rise, Tokyo)

- Transit Oriented Development centering on the intersection of two railway lines
- Large scale development (11 ha) of commercial, office, residential complex on unutilized land
- Designed to serve as a regional hub for bus network with the development of station square.
- Realized eco-friendly town through efficient energy use in infrastructure and buildings, utilization of rich natural environment along the river.
  (Awarded world's first LEED* Gold in the "Town Planning Section" in 2015)
  **LEED: Environmental performance assessment index under the control of the U.S. Green Building Council aiming at the dissemination of sustainable buildings.*



↑Location map ↓Station Square

↓Development of environment where people live in harmony with nature-abundant environment of Tama River, etc.



Source: Website of Futako Tamagawa Rise (*https://www.rise.sc/*)

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Experiences of Japan's Housing Policies -1950's: Founding period

Establishment of the three pillars of housing policies

Housing Loan Corporation (established in 1950)

Promotion of the purchasing and construction of housings through long-term, low-interest loans.

Publicly-operated housing (legislated in 1951)

Providing affordable rental housing to low-income households in short of housing

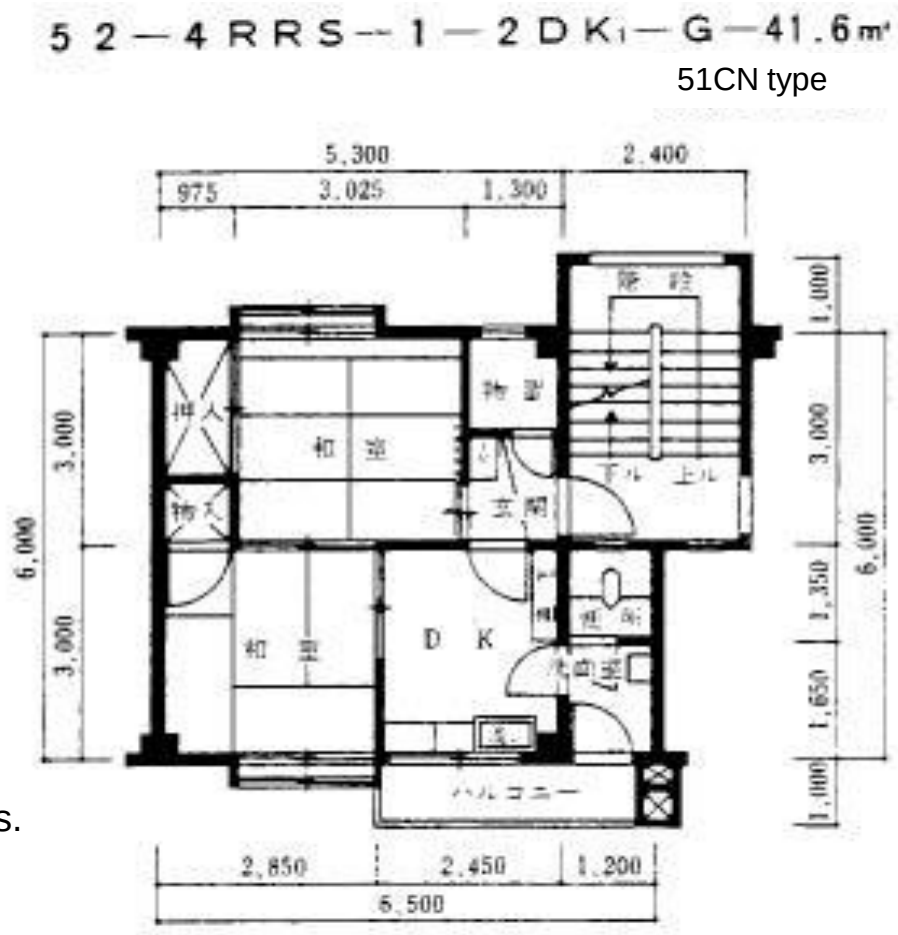
Japan Housing Corporation (established in 1955)

Develop residential land and collectively construct housing mainly in metropolitan areas.

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

"Urban Development Corporation" in 1999, and

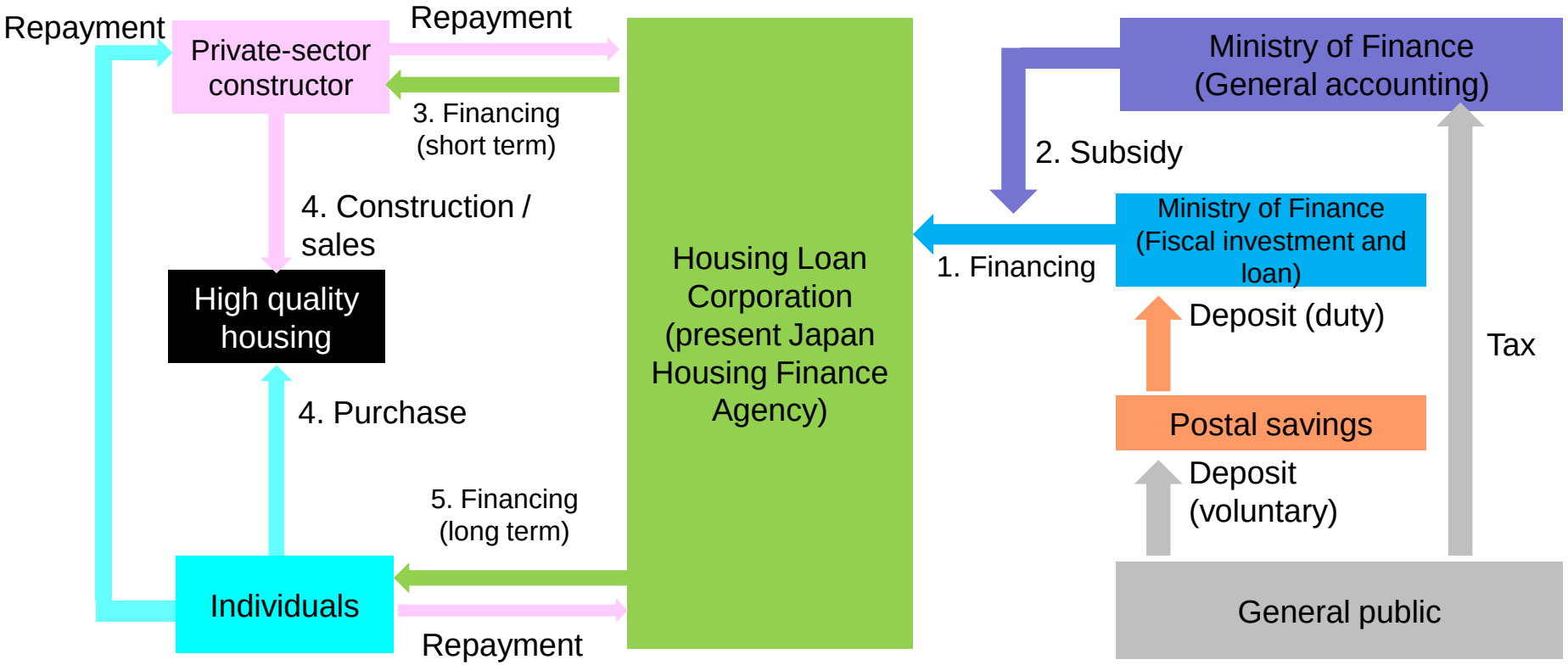
Independent Administrative Institution "Urban Renaissance Agency" in 2004.



Example of public housing (2DK type)

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

1. Housing Loan Corporation (GHLC) directly provided housing loans to individuals at a long-term, fixed interest rate using funding from the Ministry of Finance (fiscal investment and loan).
2. The interest rate of GHLC loan was kept low with government subsidy.
3. GHLC also provided short-term funds to private-sector constructors that sells housing to individuals.
4. GHLC directly provided loans to individuals who purchase housing.

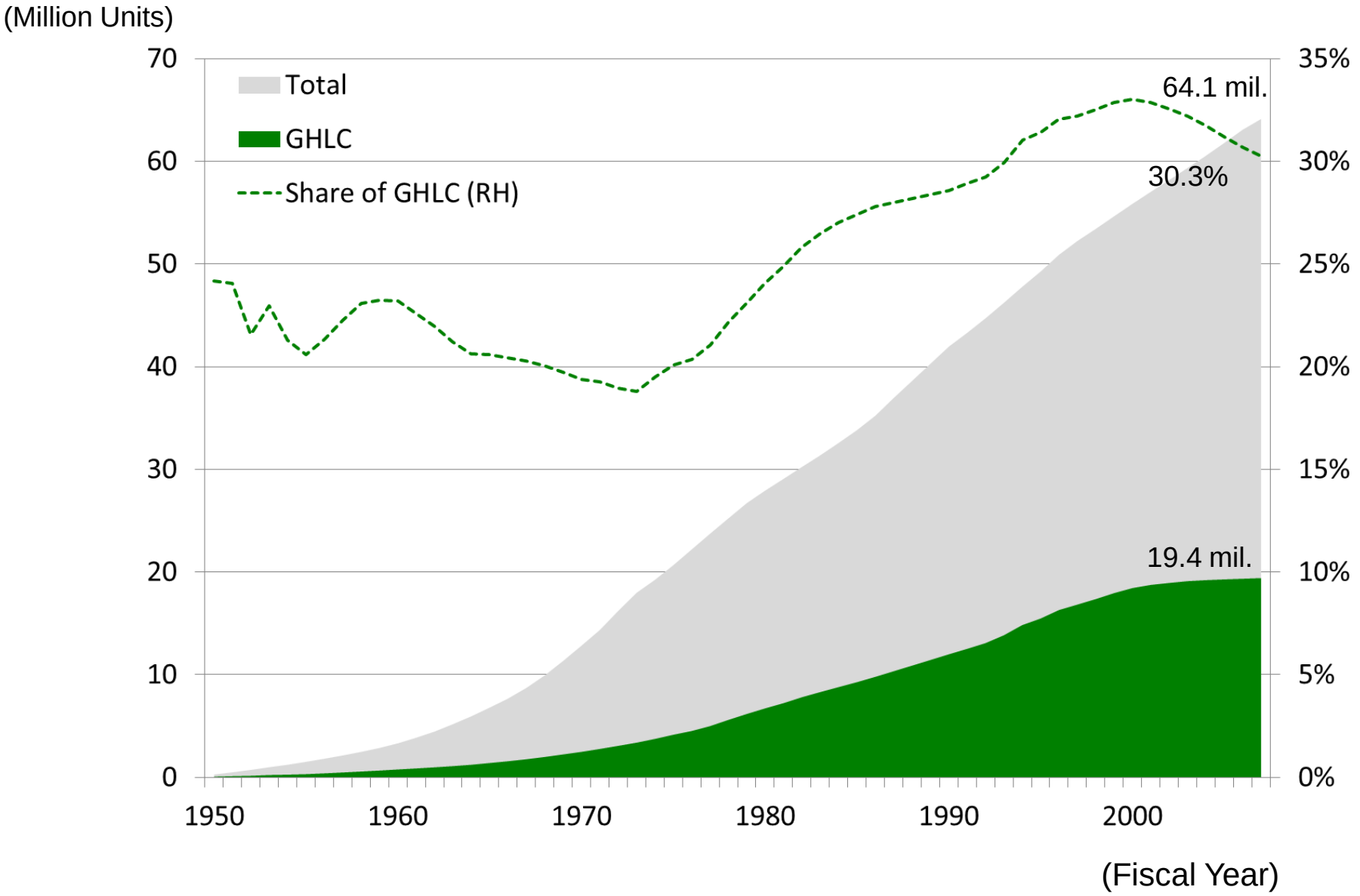


* From 1950 to 2007 (as shown in the Figure)
- Housing Loan Corporation provided housing loans directly to individuals at a long-term fixed interest rate.
- As funds for housing loans, funds collected by the Ministry of Finance from postal savings (deposits from citizens), etc. were used.

This scheme shifted as follows in 2007 in accordance with the development of the financial 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 financial market.
  (Private financial institutions procure funding from the capital market through securitization of mortgage debts by Japan Housing Finance Agency)

Housing starts and GHLC's share

Housing construction starts with GHLC loan and its share [1950-2007]



General flow of the technical review on housing loans by GHLC (for newly-constructed single-family houses)

Apply for housing loan

▼

Design review

Check the conformity of the construction works described in the application documents to the technical standards of GHLC by checking the drawings and specifications (plan view, elevational view, specifications, etc.).

▼

Construction Start

▼

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 GHLC.

▼

Notification of the on-site review results

▼

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: The Shift from Quantity to Quality

Total number of housing units exceeds total number of households in Japan (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)

- 9 tatami mats (16.4m^2) for small households and more than 12 tatami mats (21.9m^2) for general households (depending on the size of households).
- construct "a housing unit with one room for every person."

Tama New Town
(Move-in started in 1971)

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

Minimum housing standard	- Housing standard for all the public to be secured - Halve the households living under the standard by 1980.
Average housing standard	- Housing standard for average household to be secured - Aim to ensure that average household secures the standard by 1985.

The Shift from Quantity to Quality: Basic Act for Housing (2006.6.8)

Background

Housing Construction 5-Year Program

(formulated 8 times since 1966; 8th program ended in 2005)

Targets were set for numbers of houses to be constructed by public organizations, the Housing Loan Corporation and the Japan Housing Corporation, every five years.

Shift from Quantity to Quality

Drastic changes in socioeconomic conditions

- Sufficient stock of houses
- Declining birthrate, decreasing population and number of households

Shift to a new housing policy

- Provision of safe, secured and high-quality housing stock and living environment
- Establishment of a desirable housing market environment
- Establishment of housing safety nets for people having difficulty to secure a house

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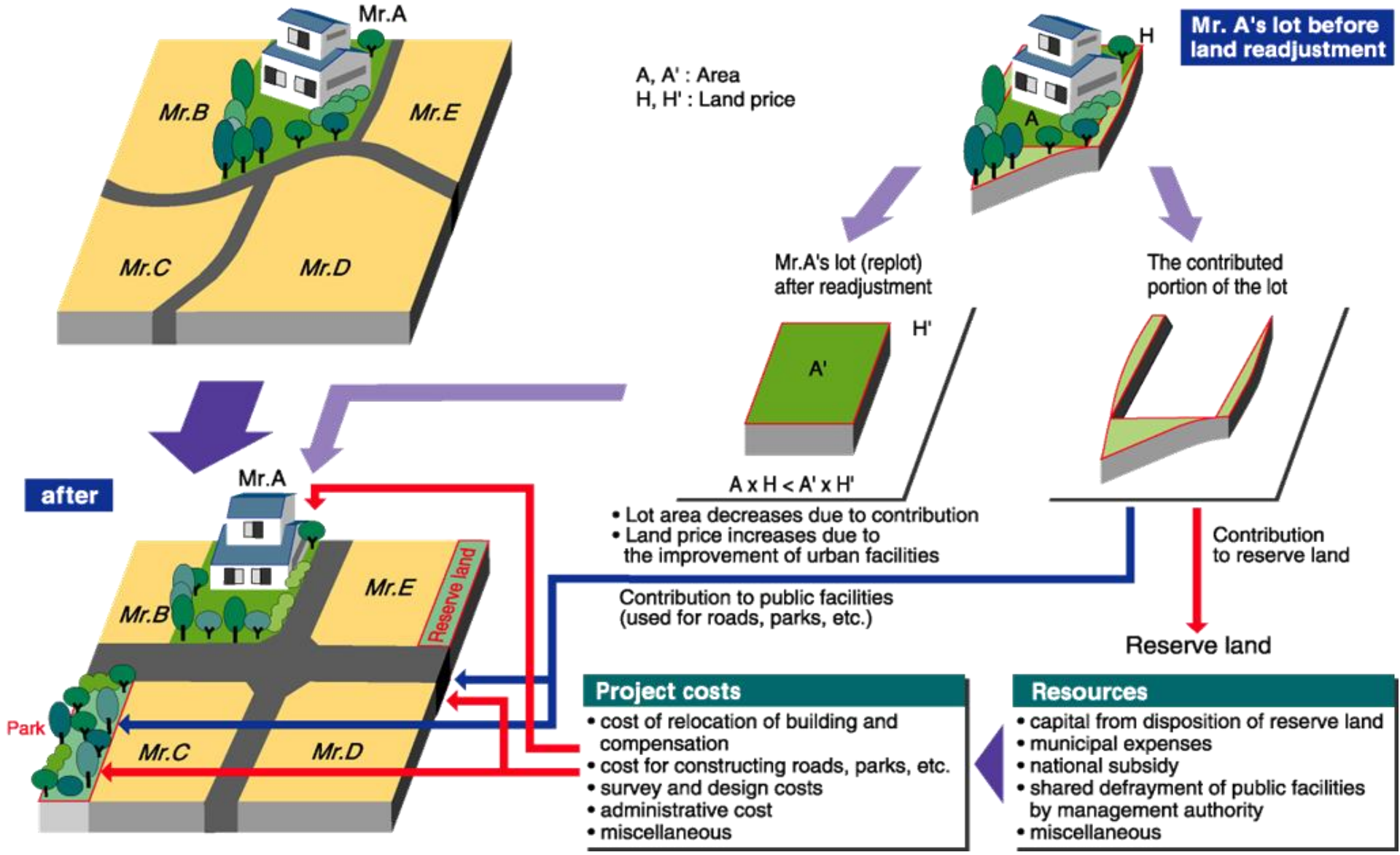
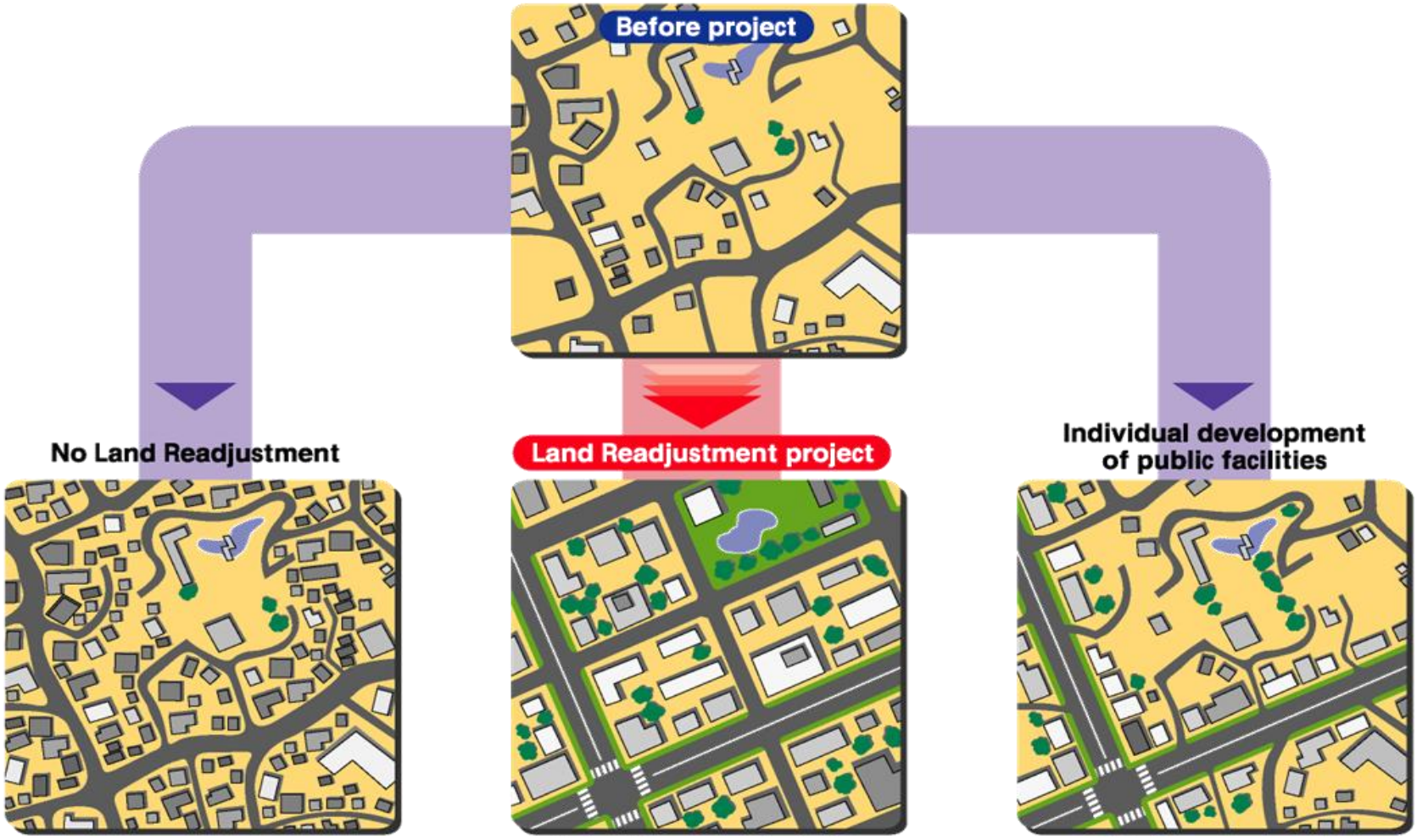
Urban Development schemes related to Indonesia's challenges (Land readjustment)

<Reference>



Urban Development schemes related to Indonesia's challenges (Land readjustment)

<Reference>



Urban Sprawl

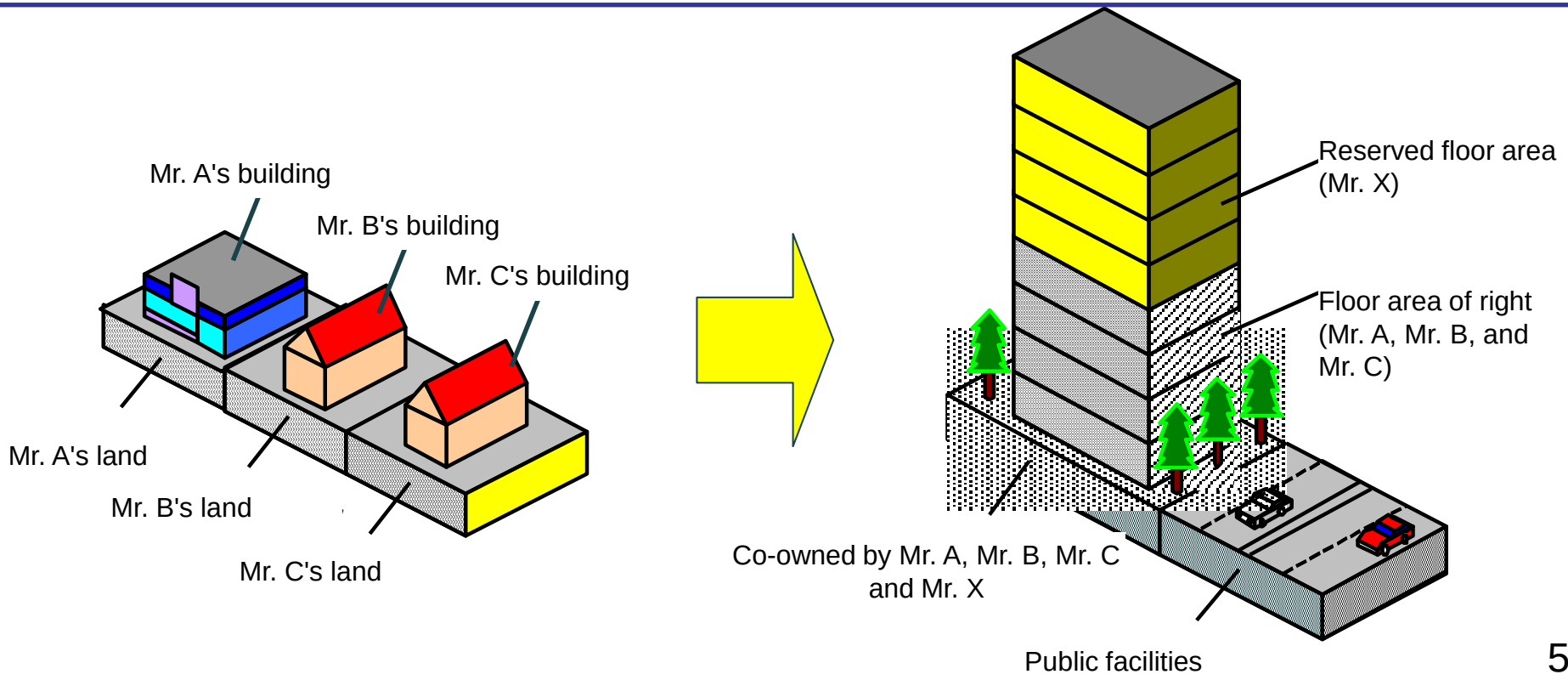
Area-wide Development
(Land Readjustment Projects, etc.)

Linear or Point Development
(Road, Park Projects, etc.)

<Reference>

Mechanism of the project

- Create a site for public facilities through co-ownership and intensive use of land.
- The rights of landowners are converted into floor area of the redeveloped building at equivalent value (Right Floor).
- The floors newly produced by intensive use (Reserved Floor) are sold to finance the project cost.



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Promotion of Overseas Deployment of Infrastructure Systems

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

In the ministerial meeting on May 2013, "Infrastructure system export strategy" was decided. The strategy set up the target to receive orders for infrastructure development totaling 30 trillion yen in 2020 (10 trillion yen for 2010). Centered on the following five pillars, specific measures are promoted.

(1) Promote public-private partnership to strengthen the global competitiveness of enterprises.
- Effective use of policy support tools
- Support for area-wide / broad-based activities
- Consistent support from upstream to downstream
- Promotion of various and powerful top sales and strategic PR
- Strengthening of the public-private partnership system, etc.

(2) Foster the 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 untapped infrastructure sectors

(5) Promotion of securing a stable and affordable supply of energy and mineral resources from overseas

Japan's support for area-wide /broad-based development

Strategic development of various support tools for economic cooperation

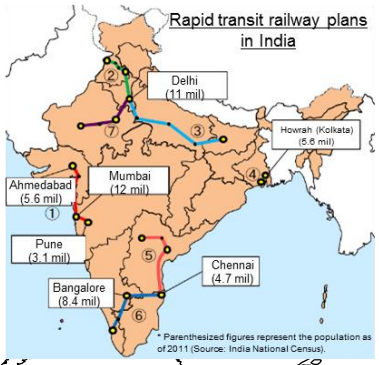
Support for M/P and F/S projects	Utilization of technical cooperation and grant aids	Utilization of ODA loans	Strengthening the support of public finance
◆ Support the formulation of a comprehensive master plan and the development o f legal systems necessary for the development of the target country. ◆ Support F/S.for large-scale infrastructure projects, etc.		◆ Speed up the procedure of ODA loans ◆ Introduce ODA loans to be repaid with foreign currency ◆ ODA loans for sub-sovereigns ◆ Introduce US dollar-denominated ODA loans, etc.	◆ Expand the target of overseas investment and financing ◆ Strengthen JBIC functions ◆ Expand the international trade-insurance system ◆ Establishment of JOIN and JICT, etc.

Japan's support for area-wide/ broad-based development

Transportation (incl. High-Speed/ urban railways) and Transit Oriented Development

[India] Mumbai-Ahmedabad HSR & Urban railway

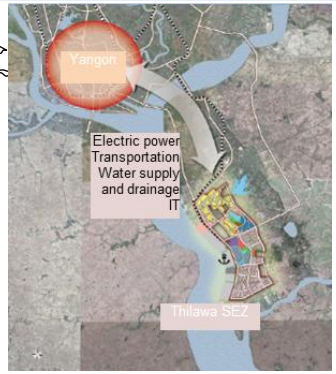
- High Speed Railway project connecting Mumbai and Ahmedabad (about 500 km, almost equal to the distance between Tokyo and Osaka) about a 2-hour journey. Total project cost is about 1.8 trillion yen (according to the media report). Of the seven routes of the rapid transit railway plan, this route was 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).



Basic infrastructure development and urban development

[Myanmar] Thilawa SEZ Development (including Thilawa Port)

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



Development of New State Capital and basic infrastructure

【India】Andhra Pradesh New State Capital Development

- AP State requested the development of master plan for 2 blocs (sport city and electric city) in the new capital region comprising of 9 blocs (217km^2)

Nacala Port

Industrial development and development/operation of oceanfront areas including port of shipment

Regional Development in the former US Military Base

【The Philippines】 Clark Air Base Redevelopment

- Project for redeveloping former US air base into investment promotion zone.
- Project area (9,450ha) is located in the Clark SEZ, which provides various tax incentives.
- JOIN supported the development of the master plan through local consulting firm co-funded with Base Conversion and Development Authority

[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 a 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 railway and port-operating companies.

Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development (JOIN)

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

《Background of foundation》

- ○ There is a huge worldwide demand (including emerging economies) for infrastructure projects.
- ○ Number of projects that utilize the private sectors are increasing, expecting their funds and know-how.
- ○ It is difficult for private sectors to enter into transport / urban development projects by themselves due to factors such as time-consuming development, demand risk in the operation stage, and influence of the local government.
- ○ Incorporation of infrastructure system export strategy into the governmental policies.

[Policy Initiatives]
- Infrastructure system export strategy (2013.5.17)
- Prime Minister Abe's speech on infrastructure system (2014.1.24)
- High quality infrastructure partnership (2015.5.21)
- Follow-up measures for high quality infrastructure partnership (2015.11.21)
- Initiative to expand the export of high-quality infrastructure (2016.5.23)
- "Japan Restoration Strategy" revised in 2016 (2016.6.2)

《Main operations》

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

《Eligible projects》

- ○ Transportation projects
  - ・Passenger / cargo transport projects by railway / vessel / airplane
  - ・Operation & maintenance of railways, roads, ports, airports, etc.
- ○ Urban development projects
  - ・Construction of buildings including housing, hotels, and offices.
  - ・Operation and maintenance of parks and sewerage, etc.
- ○ Projects that support the abovementioned projects

《Objectives》

- ○ Take in growth of the global market through entry into overseas markets.
- ○ Expand opportunities for infrastructure-related industries to obtain orders by participation in project operations.
- ○ Improve the overseas business environment of Japanese enterprises by infrastructure improvement.

⇒ Contribute to the sustainable growth of Japanese economy.

Reference: JOIN's approved projects
(i) Vietnam Thivai Port Terminal Development / Operation Project (approved by the Minister in Oct. 2015)
(ii) USA Texas Rapid Transit Railway Project (approved by the Minister in Nov. 2015)
(iii) Brazil Urban Railway Development / Operation Project (approved by the Minister in Dec. 2015)
(iv) Myanmar Yangon Complex City Development Project (approved by the Minister in July 2016)
(v) Indonesia Jakarta Suburban Complex City Development Project (approved by the Minister in October 2016)
(vi) Indonesia Freezing/Refrigerating Warehouse Development/Operation Project (approved by the Minister in January 2017)
(vii) Indonesia Jakarta Garden City Central Area Urban Development Project (approved by the Minister in May 2017)
(viii) Indonesia Jakarta Southeast Urban Development Project (approved by the Minister in July 2017)
(iv) Myanmar: Redevelopment of Defense Service Museum Site in Yangon (approved by the Minister in July 2017)

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   - 4-3. Japan's principles for infrastructure cooperation

Japan's cooperation in the urban transport field in Indonesia

- The population and GRP (gross regional product) in JABODETABEK are increasing due to the recent steady economic growth in Indonesia.
- Registration of motorbikes and motorcars have increased by 4.6 times and 2 times respectively from 2000 to 2010. On the other hand, little progress has been made in the modal shift to public transportation. The percentage of bus commuters declined from 50.1% to 16.1% from 2002 to 2010.
- To cope with this situation, JICA is supporting MRT (Mass Rapid Transit) project through ODA loan. In order to emerge from the over dependence on road traffic, it is required to advance urban development based on the public transportation system, including MRT.
- To this end, JICA is providing technical assistance to promote interactions and integration of regions and modal systems through improvement of urban transportation system and for the capacity building for Transit Oriented Development (TOD) harmonized with MRT.

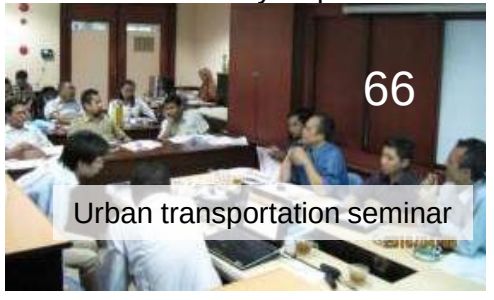
JABODETABEK Urban Transportation Policy Integration Project

In order to comprehensively improve Jakarta's urban transport situation, a JICA expert team was dispatched in 2009 and is implementing the JABODETABEK Urban Transportation Policy Integration project.

The project entered into Phase 2 in 2014 and is implementing the following activities:

1. Formation of government-wide and region-wide framework to implement comprehensive urban transportation policy.
2. Support for implementation of pilot projects in JABODETABEK and capacity building of agencies related to urban transportation through the implementation of the projects.
3. Capacity building of agencies related to urban transportation for implementing TOD projects in JABODETABEK.

Dukuh Atas Station Area Development Plan
* JICA PPP Study Report

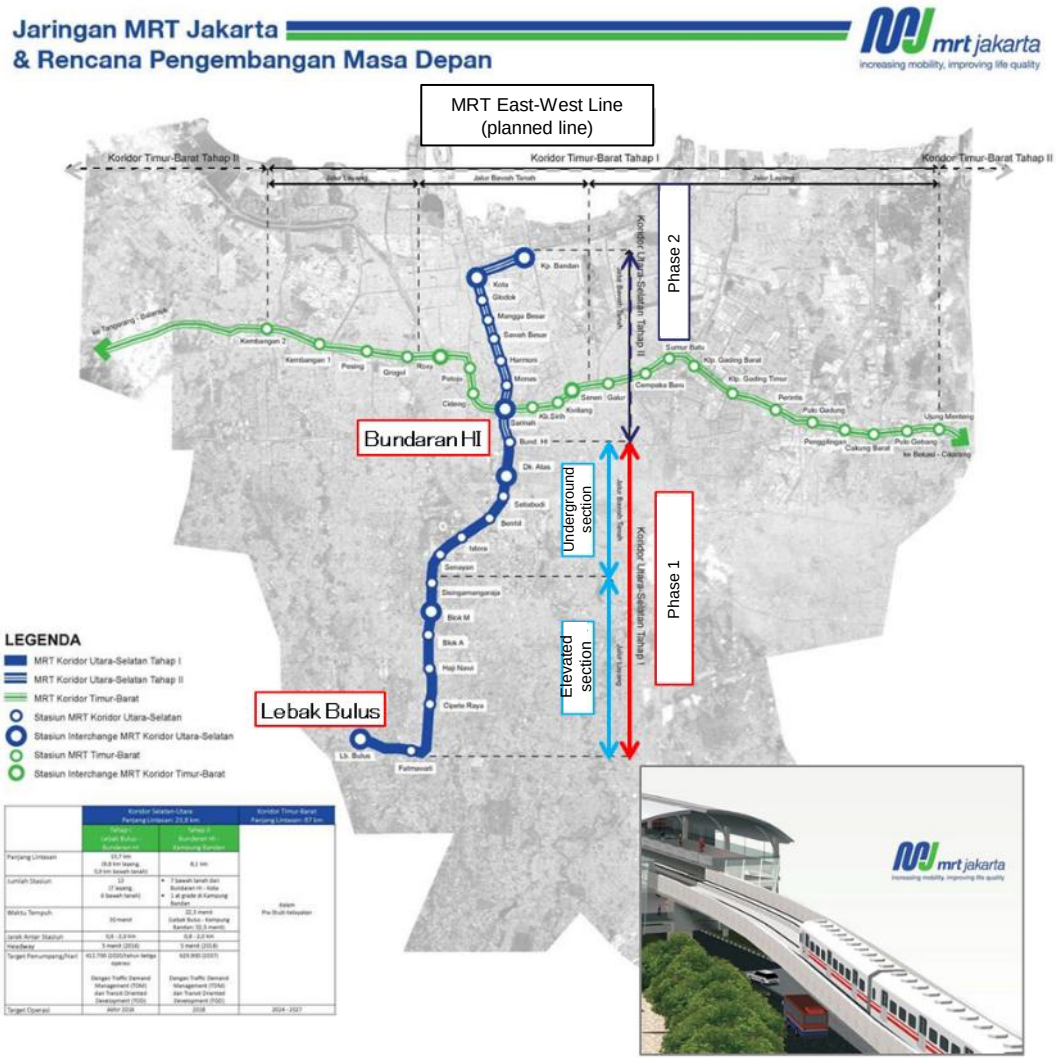


Urban transportation seminar

Jakarta Mass Rapid Transit (MRT) Project

- JICA is supporting the Jakarta Mass Rapid Transit (MRT) project through ODA loan.
- The project is targeting at the construction of an urban railway connecting central Jakarta and southwestern urban area.

Jakarta Mass Rapid Transit (MRT) Project



[MRT North-South Line (Phase 1)]

- Section: Lebak Bulus - Bundaran HI
- Line length: 15.7 km
- Project owner: PT Mass Rapid Transit Jakarta (Jakarta MRT)
- Opening time: 2019 (planned)
- Contract made: May-October 2013

○ Package 1/2 (Elevated line) = Tokyu Construction, WIKA
Cost: about 22.5 billion yen
Contract date: Oct. 2013

○ Package 3 (Elevated line) = OBAYASHI, SHIMIZU, JAYA
Cost: 10 billion yen
Contract made: Oct. 2013

○ Package 4/5 (Underground line)= SHIMIZU, OBAYASHI, WIKA, JAYA
Cost: about 19.4 billion yen
Contract date: June 2013

○ Package 6 (Underground line) = Sumitomo Mitsui Construction, HK
Cost: about 15.6 billion yen
Contract date: June 2013

* Construction supervision consultant = Oriental Consultants Global JV

○ Package 7 (Systems)= Mitsui, Toyo Engineering, Kobe Steel
Cost: about 25 billion yen
Contract date: April 2015

○ Package 8 (train cars) = Sumitomo, Nippon Sharyo
Cost: about 13 billion yen
Contract date: Mar. 2015

Japan’s cooperation in the Housing and Building Fields in Indonesia

- Since the 1970's, Japanese government has provided technical cooperation and financial assistances through the dispatch of experts and the acceptance of trainees in such fields as housing supply for low-income households and improvement of the earthquake resistance of buildings.
- From 2007 to 2014, the “Project on Building Administration and Enforcement Capacity Development for Seismic Resilience” (phase 1 and phase 2) was implemented to improve the earthquake resistance of buildings.
- Since 2013, high-level talks has been held in the field of housing and building, including earthquake resistance of buildings, in the Japan-Indonesia Construction Vice-Ministerial Meeting.
- In December 2016, the Memorandum of Cooperation on Infrastructure Development between two ministers was revised and "Housing supply and Housing finance" was added.

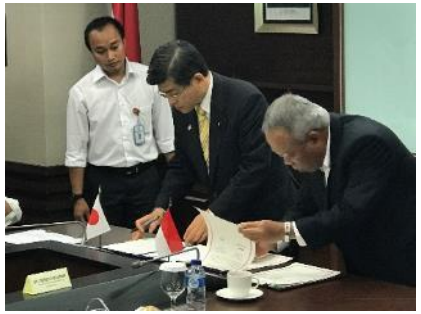
[Recent activities]

○ Feb. 2017: The 4th the Japan-Indonesia Construction Vice-Ministerial Meeting was held in Jakarta. An exchange of information on housing supply, housing loans, and building disaster-prevention was held in the housing / construction WG,.

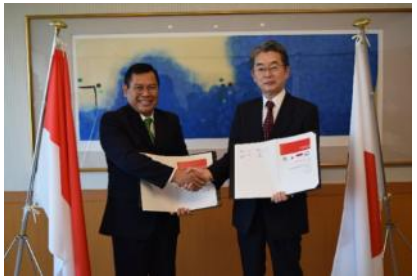
○ July: A Memorandum of Cooperation was concluded between the Japan Housing Finance Agency and the Indonesian SMF (Government owned housing-loan securitization authority)

○ August: A workshop was held on earthquake-resistant building in Bandung.

○ November: Exchange of opinions related to the housing / construction fields is also planned for the 5th Vice-Ministerial Meeting.



Conclusion of the revised Memorandum



Conclusion of the memorandum concerning housing loans

Japan's cooperation in the construction industry field in Indonesia

Development of business environment

○ Japan-Indonesia Construction Conference

Held 9 times in the past. In the 5th Conference in, 2009, MLIT and the Indonesian Ministry of Public Works agreed on strengthening the relationship between both countries, and to hold the Conference regularly, etc. The 10th Conference is to be held this autumn.

The 9th Japan-Indonesia Construction Conference

○ Training program in cooperation with the College of Land, Infrastructure, Transport and Tourism

In order to improve the business environment in ASEAN nations, the "Construction Industry Policy Program," for manager level of ASEAN governments will be held this September. The program consists of lectures on Japanese construction policies and visits to major project sites.

Creation of business opportunity

○ Support of overseas advancement of construction SMEs

- The Japan Association of Small and Medium-sized enterprises for Overseas Construction (JASMOC) was established as a platform for supporting overseas advancement of construction SMEs.
- In order to support overseas advancement of Japan's SMEs with unique technology and know-hows, JASMOC assists them in selling their technologies, building relations with local personnel, etc. through holding "overseas advancement strategy seminars" focused on Indonesia, dispatching missions, etc.

Market research
(began in May, 2017)

Market research

Hold seminars
(June and July, 2017)

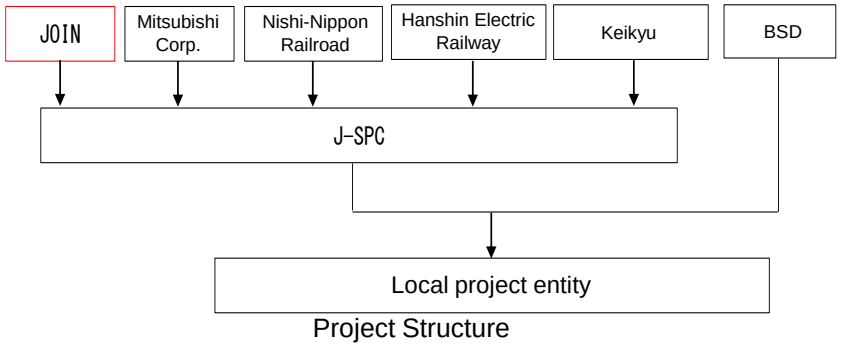
Overseas advancement strategy seminar

Dispatch of missions
(planned for the end of October, 2017)

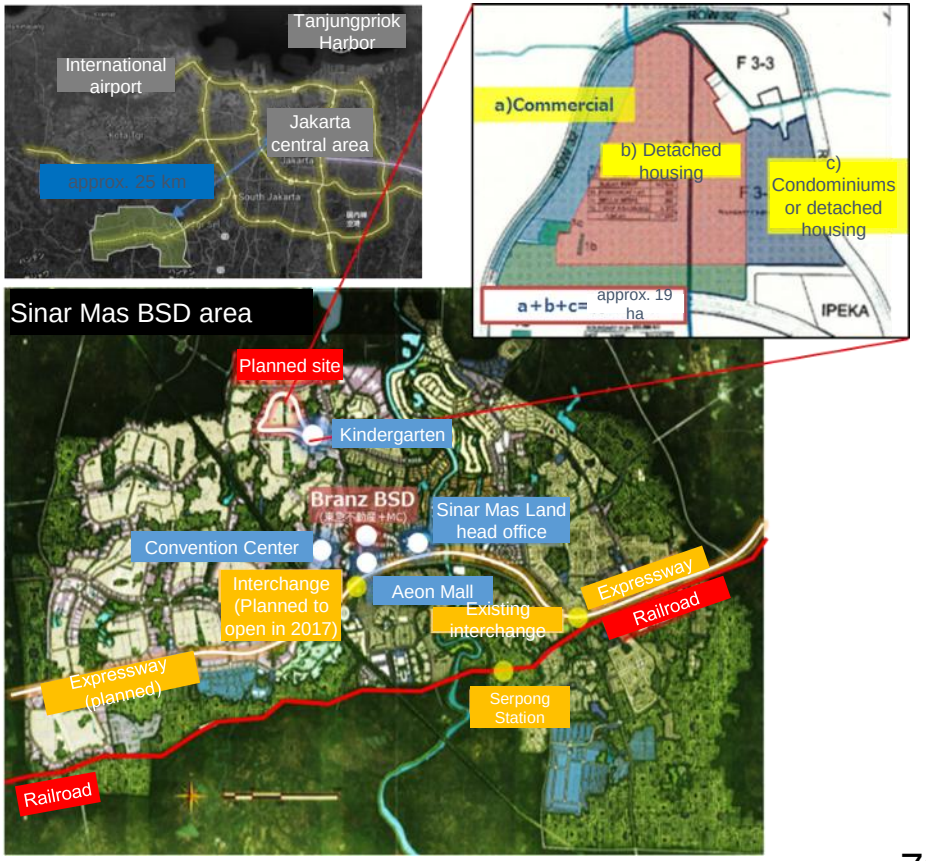
Dispatch of a mission

<JOIN Projects in Indonesia> BSD Complex City Development

- A project for development of detached houses and a shopping center in the suburbs of Jakarta, 25 km away from central Jakarta, financed by Mitsubishi Corporation, Nishi-Nippon Railroad, Hanshin Electric Railway, Keikyu, JOIN, and BSD (a subsidiary of Sinar Mas Land).
- In cooperation with Sinar Mas Land Japanese enterprises took the initiative from the zoning stage to realize area development and next-generation community development in the Japanese style.
- JOIN's first project in the urban development field in Indonesia.

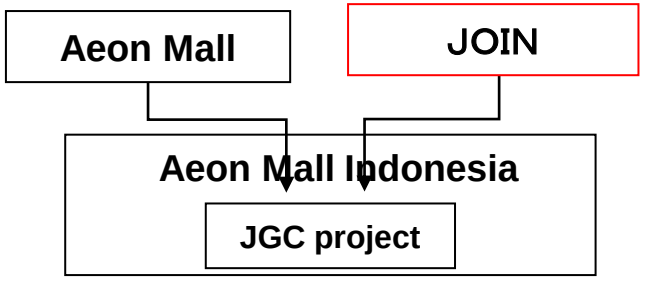


Project Structure

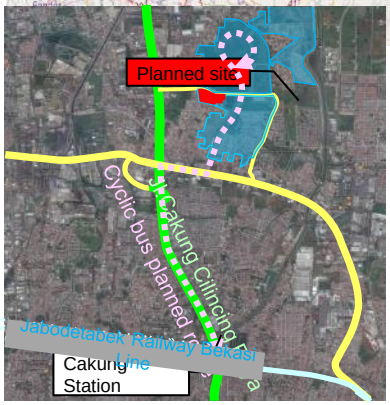


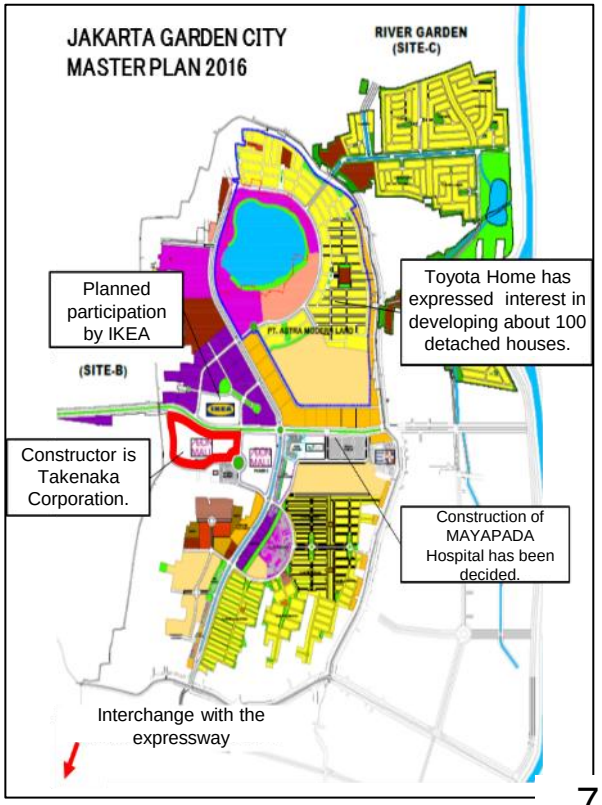
<JOIN Projects in Indonesia> Jakarta Garden City Urban Development

- Urban development project to develop and operate commercial facilities, parking lot, bus pool used for public transportation, etc. in Jakarta Garden City (JGC: about 20km east Jakarta), invested by Aeon Mall Indonesia and JOIN.
- Promote the development of residential, commercial, educational, medical facilities through the development of a shopping mall.
- The project aims at strengthening the community's disaster preparedness by developing facilities that serve as bases of disaster response, as well as promoting TOD through the development of the bus pool.



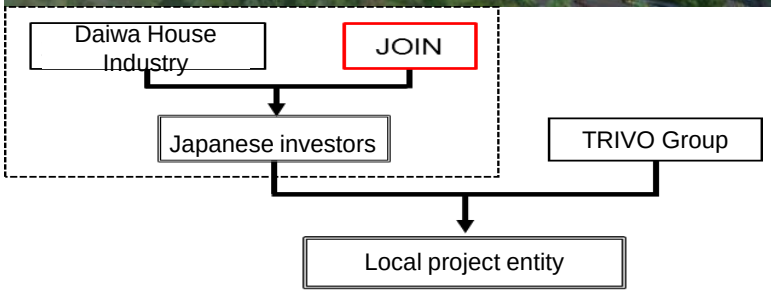
Project scheme





<JOIN Projects in Indonesia> Southeast Urban Development Project

- Urban development project to construct, sell and operate complexes of condominiums, shopping malls, offices, and a hotel in the south of Jakarta, invested by Daiwa House Industry, JOIN and Indonesia's TRIVO Group.
- The project aims at promoting proliferation of Japanese style high-quality operation & maintenance services.
- The project also aims at increasing the use of LRT as well as energizing the project area through pedestrian deck and sidewalks in cooperation with the LRT operator (Transit Oriented Development).



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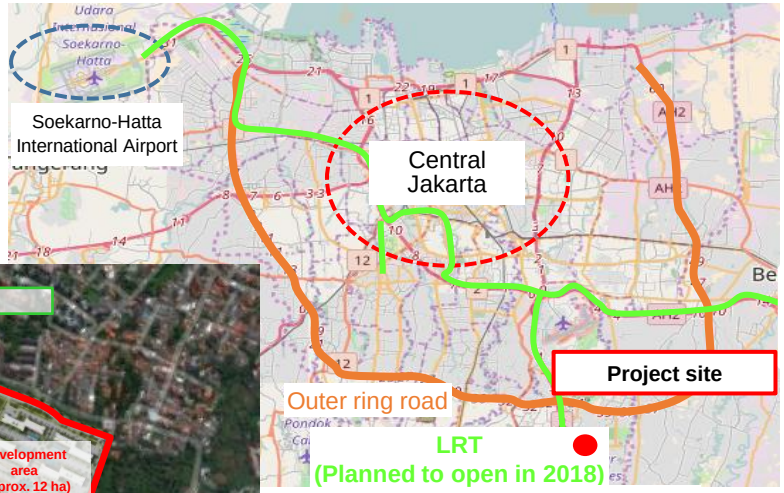

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Japan's Principles for Infrastructure cooperation (including Urban development)

The objective of Japan's infrastructure cooperation including urban development is the contribution to the sustainable development under the partnership between the government, businesses and local communities of foreign countries.

① *Local First*

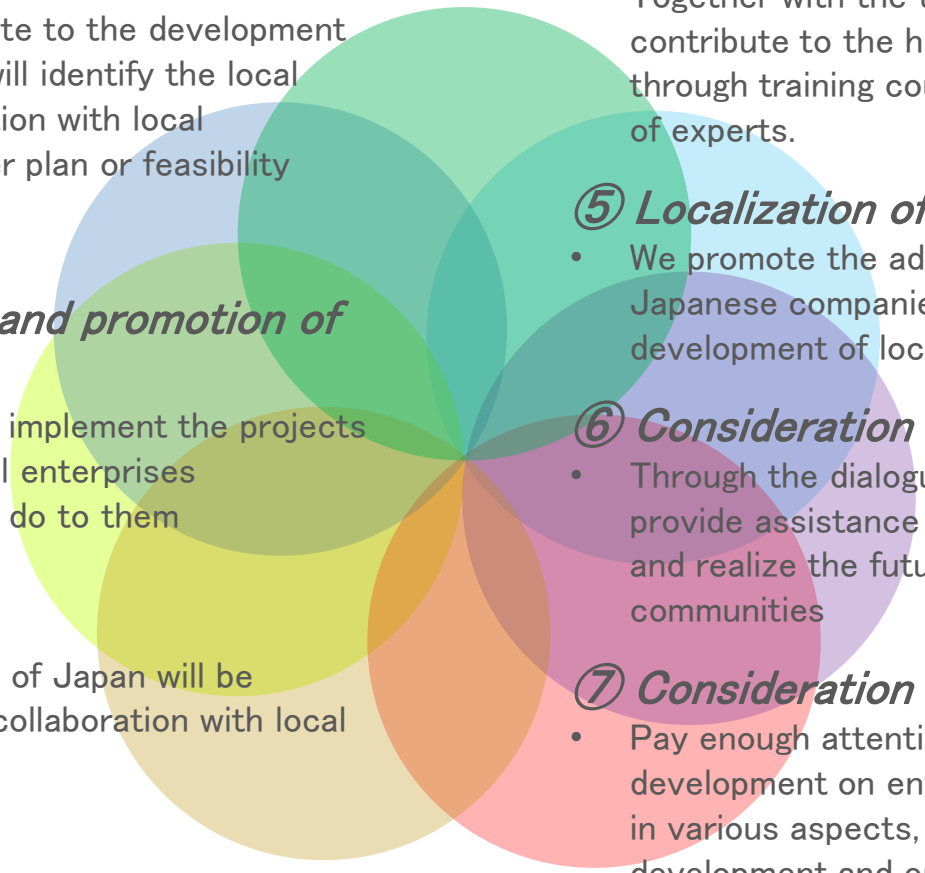
- In order to truly contribute to the development of local community, we will identify the local needs through collaboration with local governments from master plan or feasibility stages.

② *Collaboration with and promotion of local enterprises*

- Japanese companies will implement the projects in collaboration with local enterprises
- Leave local partners can do to them

③ *Transfer of Skills*

- The knowledge and skills of Japan will be transferred through the collaboration with local partners



④ *Human Resource Development*

- Together with the transfer of skills, we will contribute to the human resource development through training courses in Japan and dispatch of experts.

⑤ *Localization of Japanese Companies*

- We promote the advance and the localization of Japanese companies to contribute to the development of local economy and society.

⑥ *Consideration to Local Communities*

- Through the dialogues with local communities, we provide assistance to address existing challenges and realize the future prosperity in local communities

⑦ *Consideration to Local Environment*

- Pay enough attention to the impact of development on environment and climate change in various aspects, in order to equitably meet development and environmental nee ensure sustainable development

I sincerely hope that this seminar be the trigger for accelerating urban development projects in Indonesia, which contributes to

the improvement of the quality of life of Indonesian people, and the prosperity of Indonesian society and economy,

through the closer collaboration of public and private sectors of both Indonesia and Japan.

Thank you very much for your attention.