

Accessible Mobility

- Features of Station Area Development in Japan

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November 16, 2019

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Kyoto State Guest House

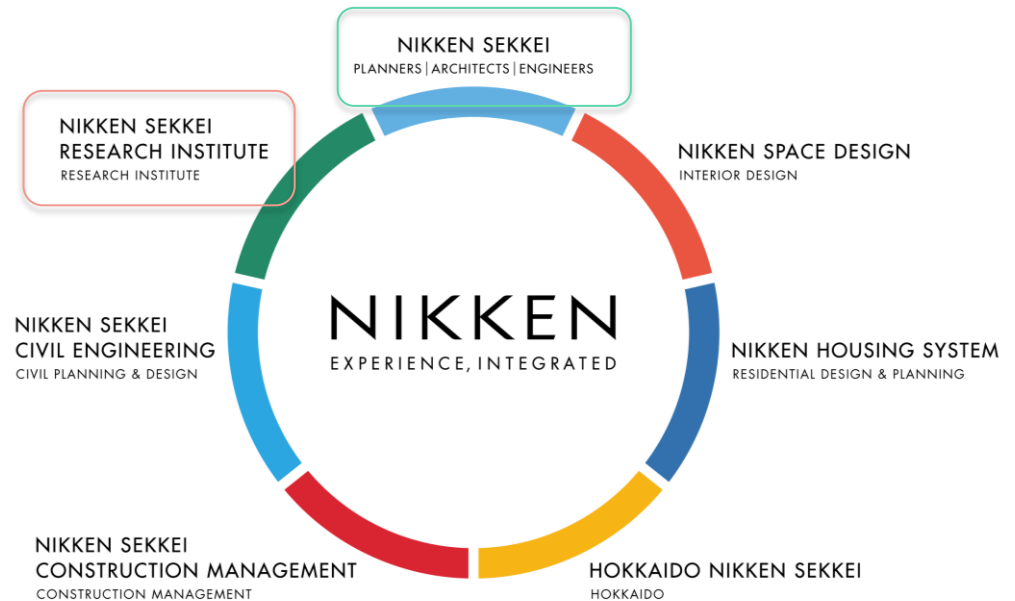
NIKKEN GROUP

- More than 100 years old Legacy

- Multi-Disciplinary Design Consultancy Firm, Established in 1900
- Over 25,000 projects in more than 50 countries
- 2700 staffs in Nikken Sekkei Group



TOD books published by Nikken Group



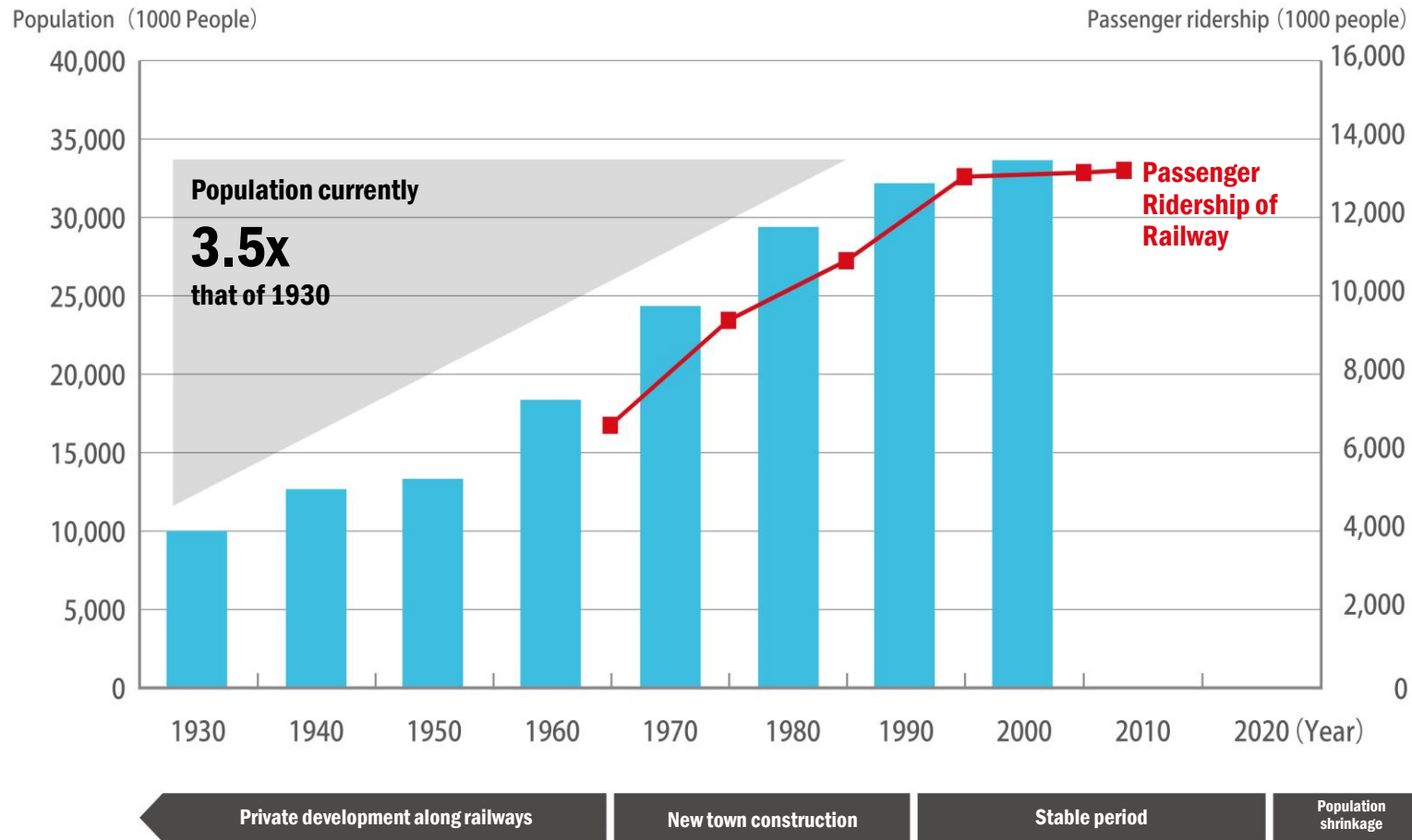
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1. Metropolitan Structure and TOD in Japan

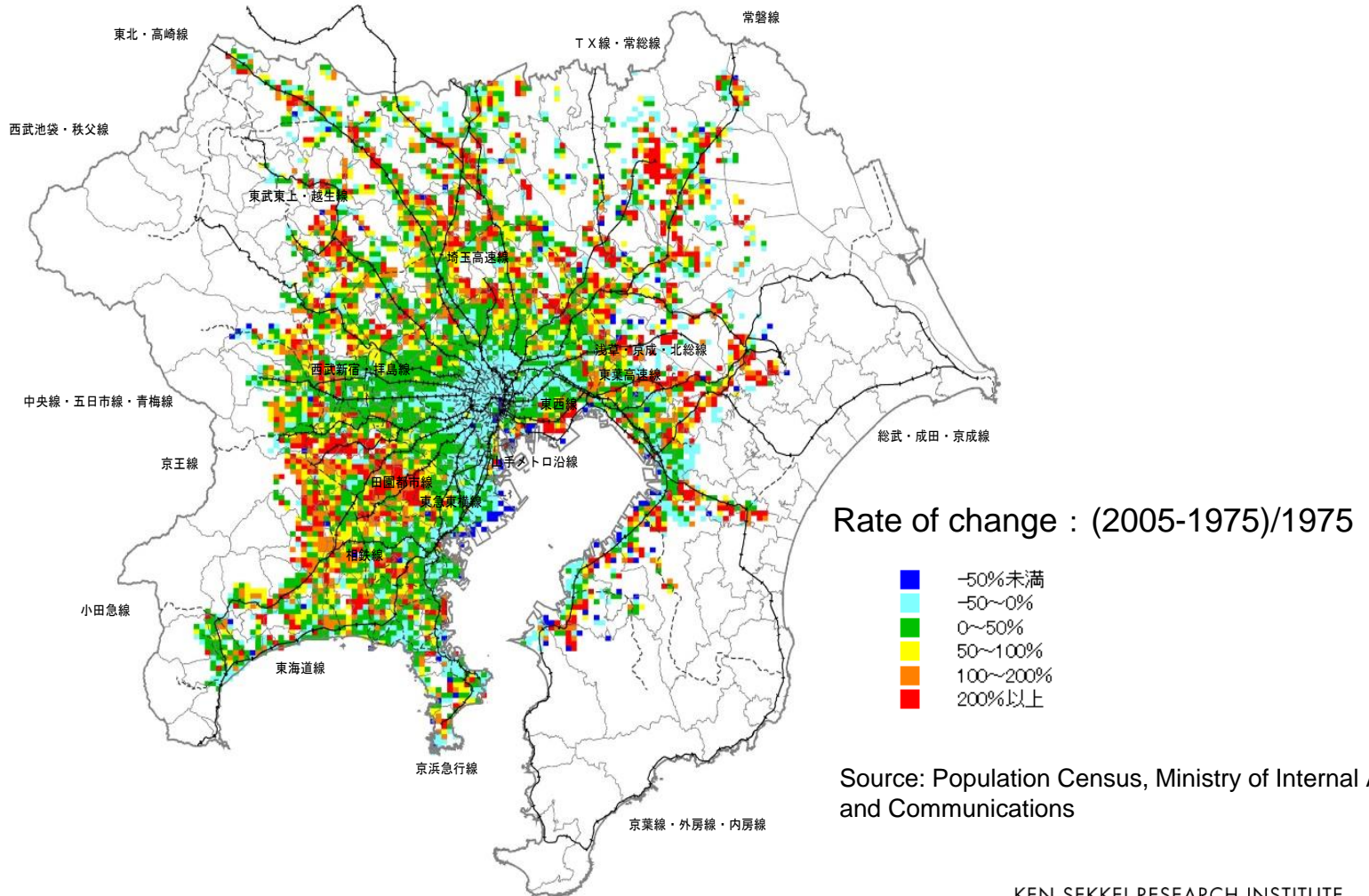
1. Metropolitan Structure and TOD in Japan

Population growth and passenger ridership in the Tokyo Metropolitan Area

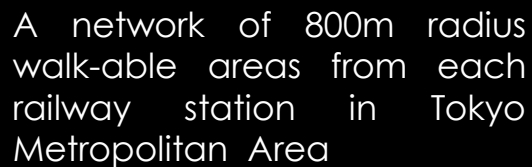


1. Metropolitan Structure and TOD in Japan

Population have increased along the railway lines in the Tokyo Metropolitan Area

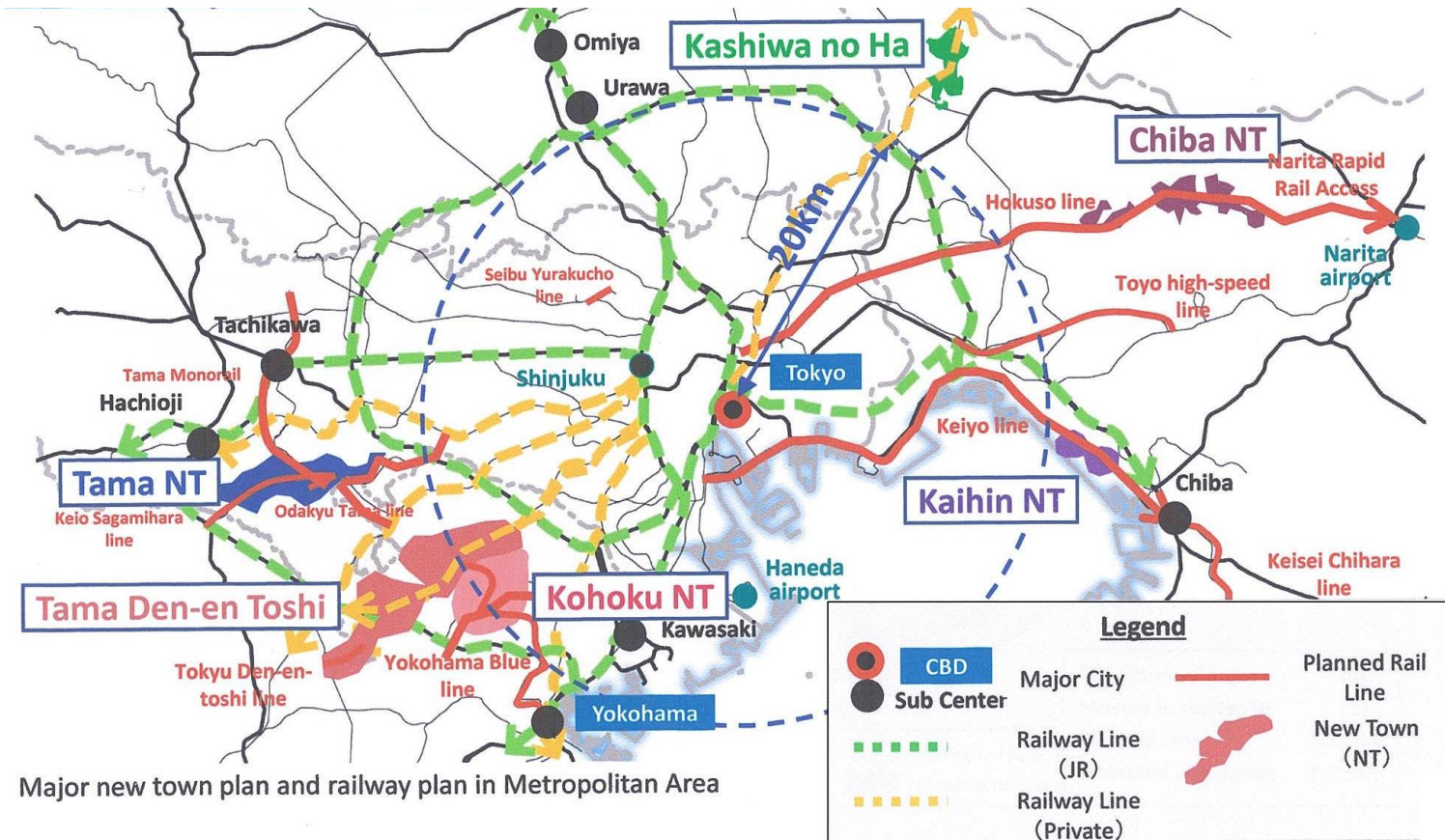


TOKYO 23 Wards: Distance to the nearest Rail Station



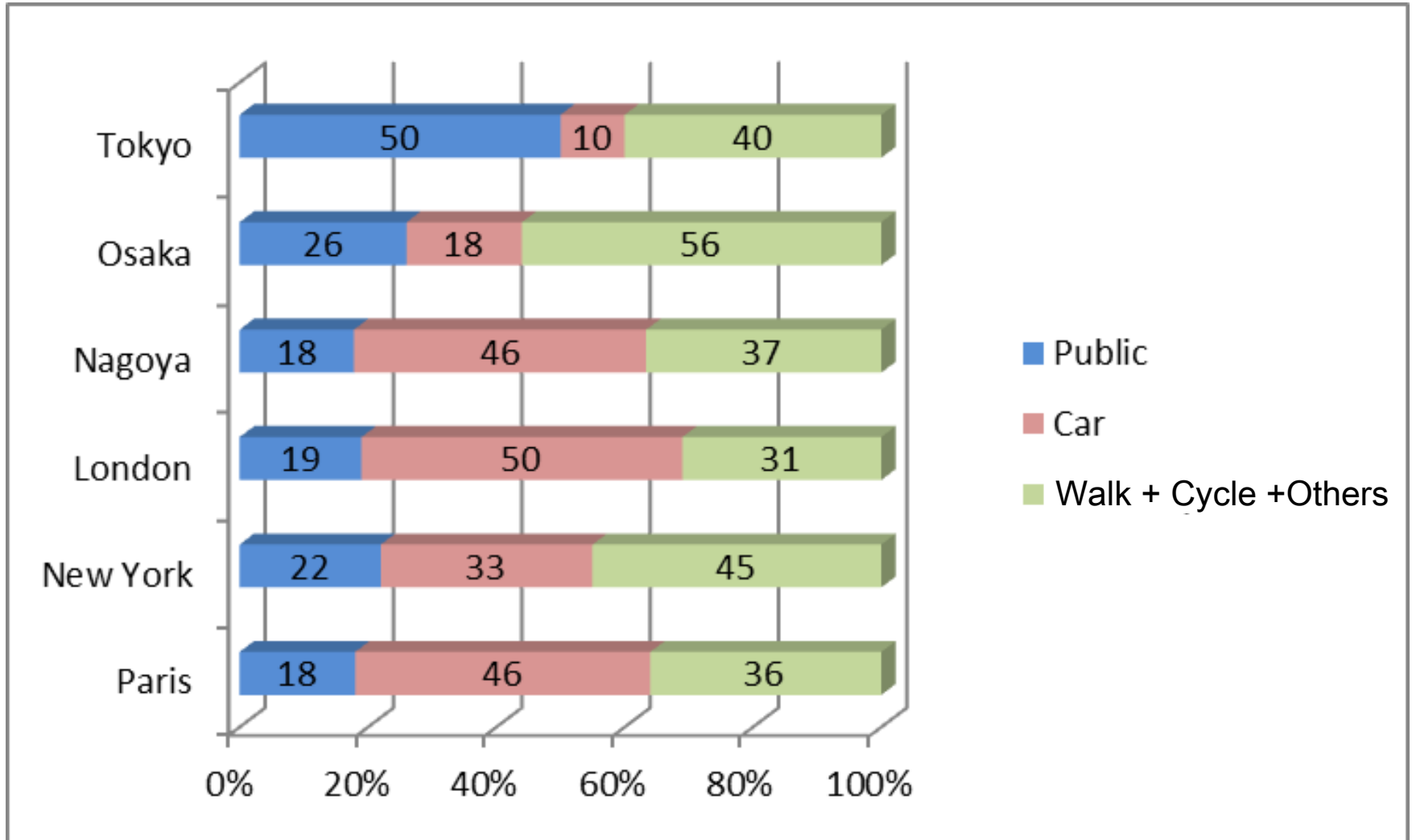
1. Metropolitan Structure and TOD in Japan

New town development along railway lines in the Tokyo Metropolitan Area by both public and private sector



1. Metropolitan Structure and TOD in Japan

Passenger transport modal share ratio of typical megacity



Source : MLIT(Tokyo:2008/Osaka:2005/Nagoya:2005/New York:2009)

1. Metropolitan Structure and TOD in Japan

Features 1: Multi-polar urban structure

A greater metropolitan area coordinating with urban centers consisting of multiple subcenters and regional core cities

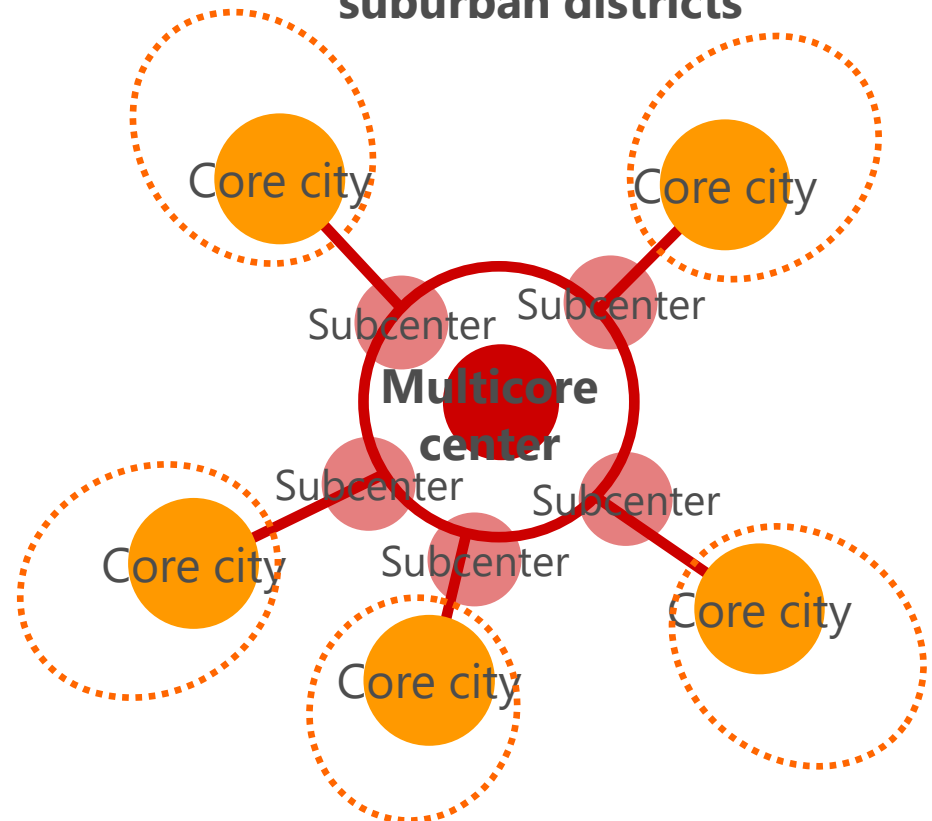


Shinjuku subcenter (in central city area)



Tsukuba Science City (regional core city)

Formation of characteristic suburban districts



1. Metropolitan Structure and TOD in Japan

Feature 2 : City expansion by urban development along railway lines (TOD urban structure)

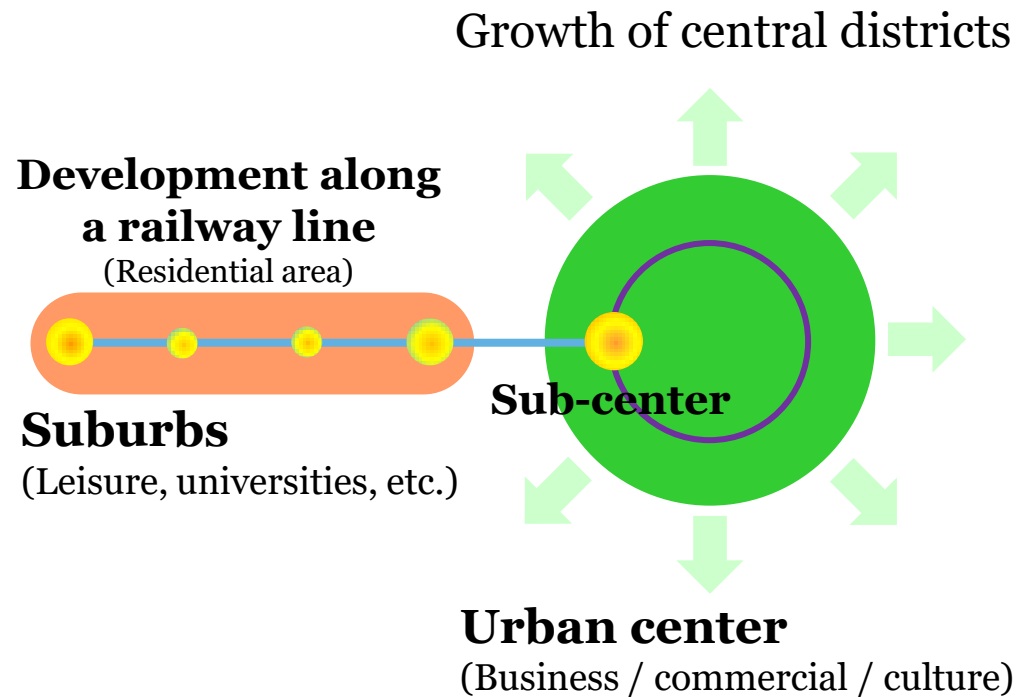
Development along railway lines integrated with railway improvements, regional branding by private railway companies, etc.



Shibuya (Mixed-use development at an urban center terminal)



Tama-Plaza (Base improvement at a suburban terminal)



1. Metropolitan Structure and TOD in Japan

Feature 3 : Environment-friendly and energy saving urban development (surrounding stations)

Efficient energy consumption, resource recycling and area energy management

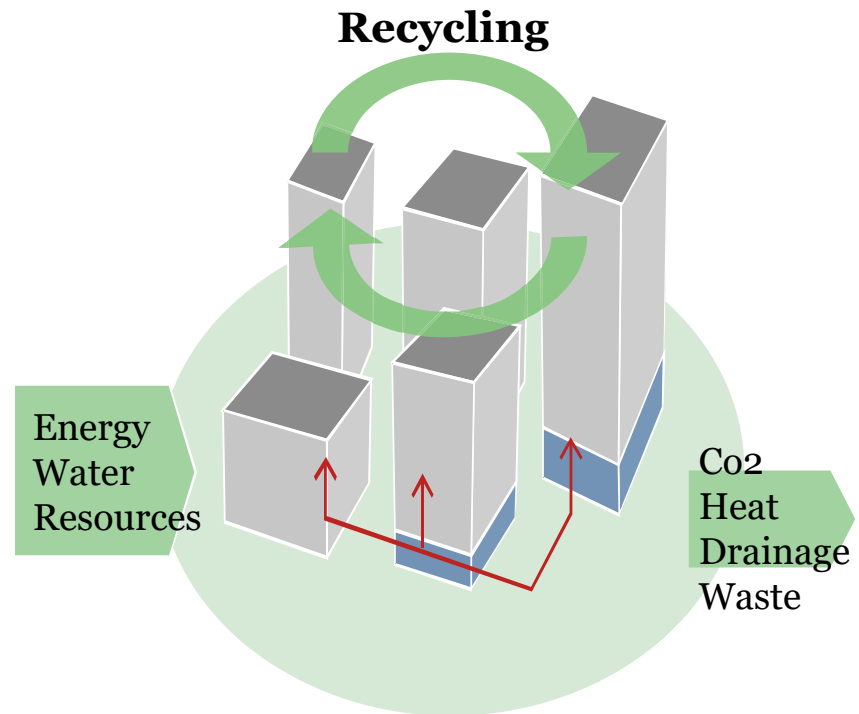


Harumi Triton Square (Urban center model)

- Highly efficient DHC / Area energy management

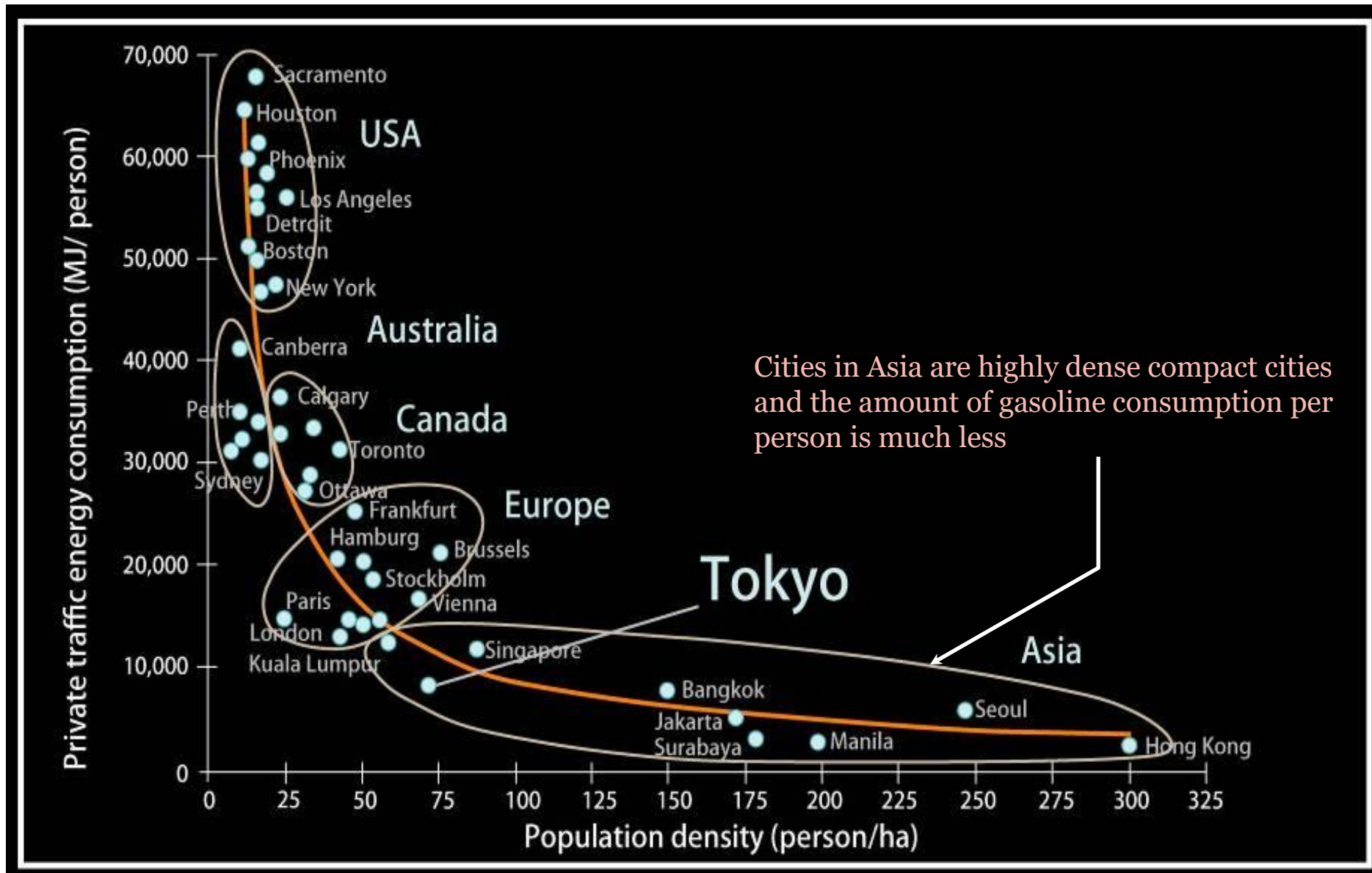


Kashiwa-no-ha (Suburban Smart City model)



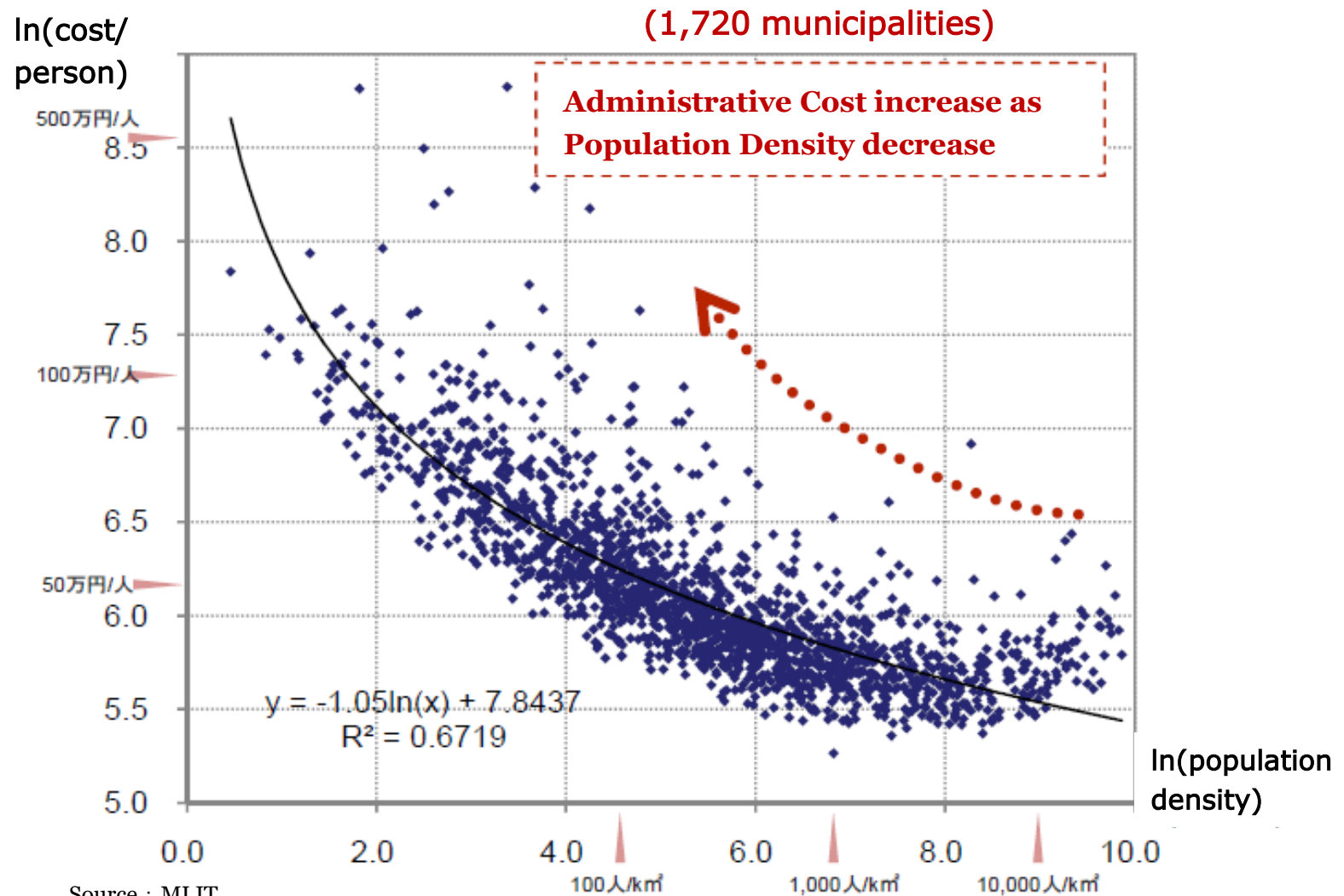
Area Energy Management System

Population density and transportation energy consumption per person in cities



Source: P. Newman and J. Kenworthy, SUSTAINABILITY AND CITIES. Island Press, 1999

Correlation between Administrative Cost & Population Density (2006-2008)



Source : MLIT

2. History and Features of Station Area Development in Japan

1. History and Features of Station Area Development in Japan

Evolution of Terminal Development in Japan

1870

1900

Symbolic station building and city development



1960

Expansion and development of underground malls



1920

Department stores at private railway terminals



1970

Active redevelopment in front of stations



1950

Emergence of “public station” – proliferation of station buildings



1990

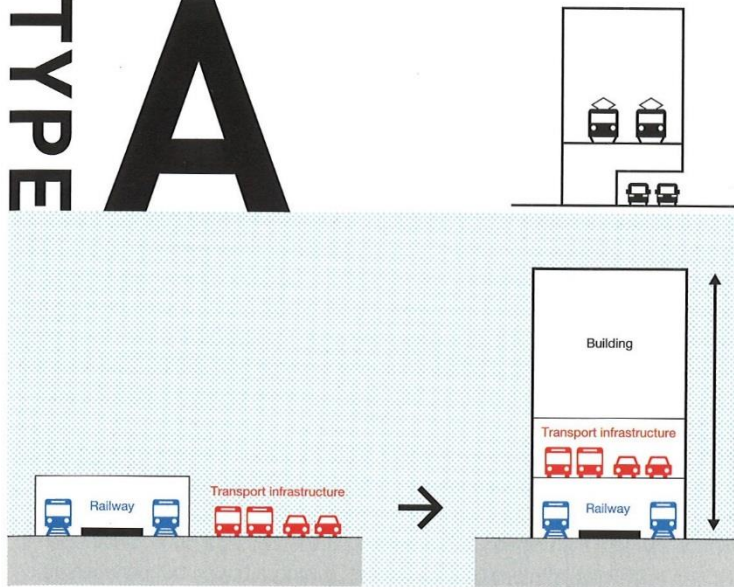
New era of integrated station area development



NOW

1. History and Features of Station Area Development in Japan

TYPE A

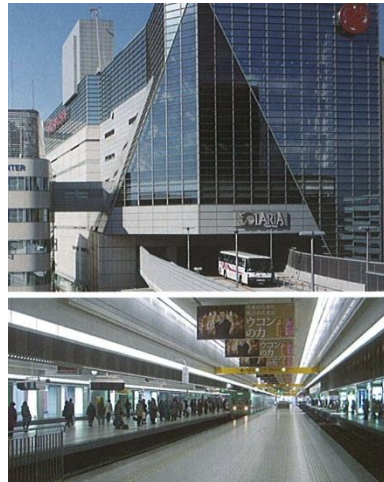


Integration of Station, Infrastructure and Buildings

駅、駅前広場、バスターミナルなどを上下に組合せて交通結節性を強化し、同時に駅直上で付加価値の高い施設を整備し、拠点性を高めるタイプ。



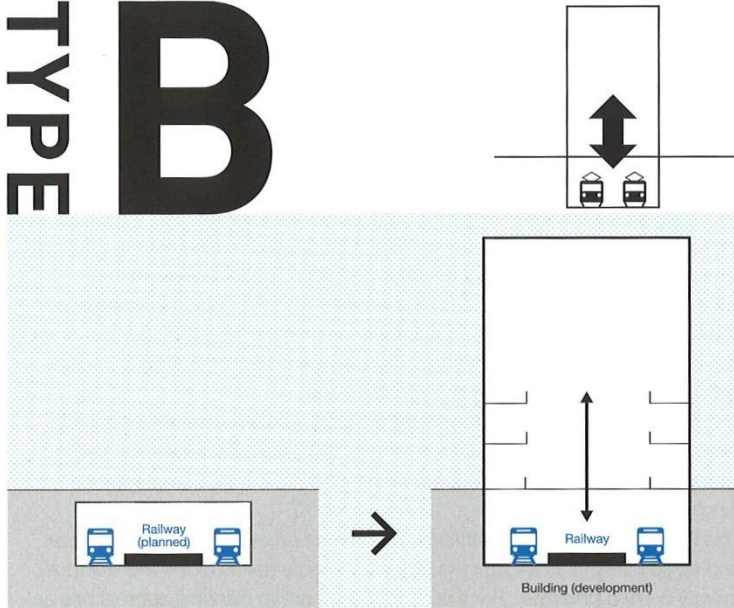
Nisshokoku Fukuoka Terminal



Shinyokohama Station

1. History and Features of Station Area Development in Japan

TYPE B



Integration of underground station into building and surrounding urban area

地下と地上をつなぐ象徴的で開放的な吹き抜けやサンクンガーデンを設け、地下駅とまちとのつながりを強化するタイプ。



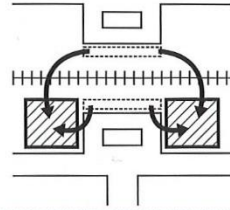
Minatomirai Station, Yokohama



Roppongi Itchyome Station

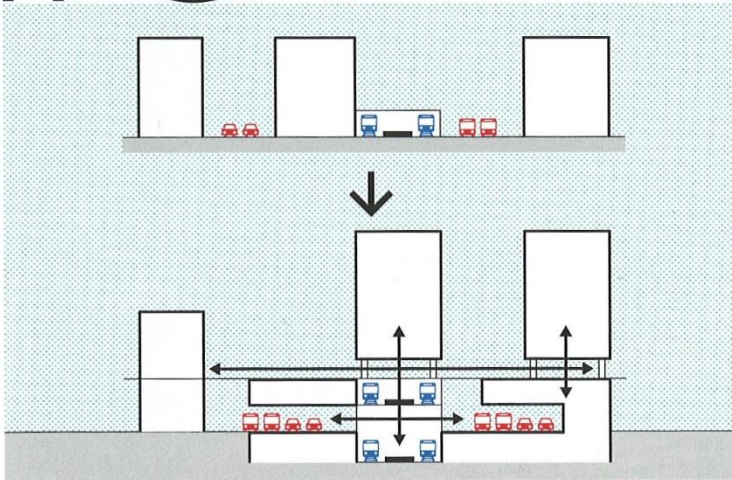
1. History and Features of Station Area Development in Japan

TYPE C

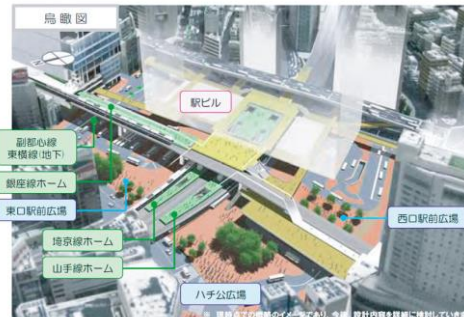


Integrated Regeneration of Station and Surrounding Area

駅だけに留まらず、まちのスケールで都市機能を再配置し、駅とまちの抱える課題を一体的に解決するタイプ。



Tokyo Station/ Yaesu Side



Shibuya Station Area



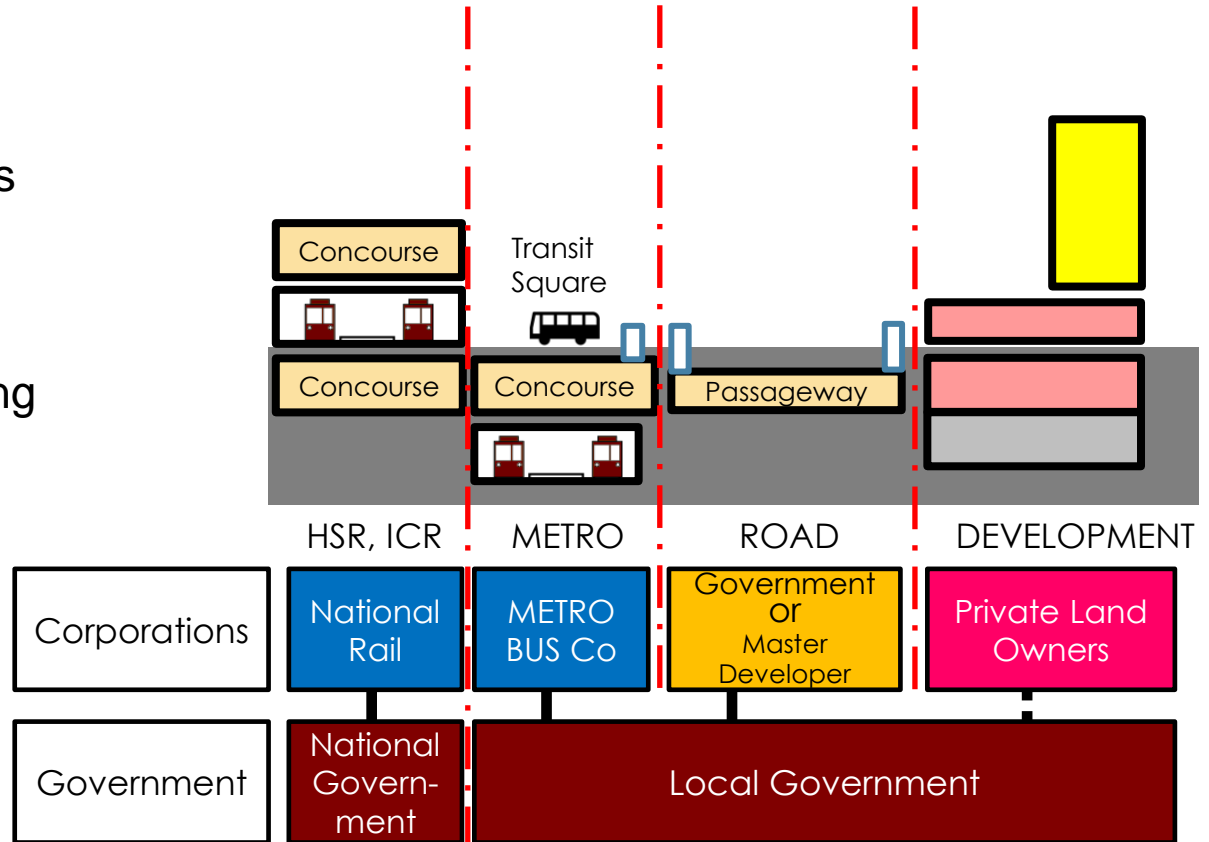
Station Building in Shibuya

1. History and Features of Station Area Development in Japan

ISSUES in IMPLEMENTATION OF STATION AREA DEVELOPMENT

Typical Station Area Issues

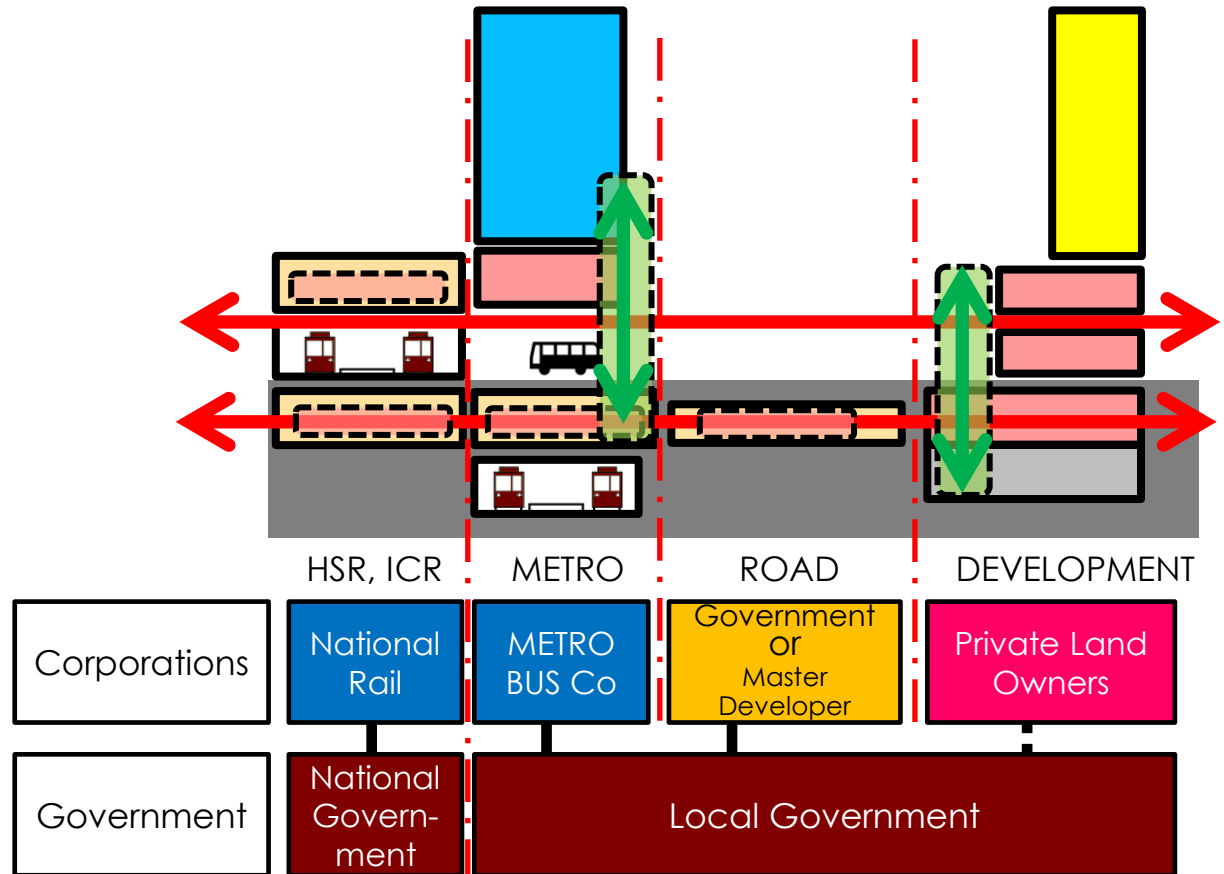
- Many stakeholders
- Different schedule
- Different decision-making
- Different motivation



1. History and Features of Station Area Development in Japan

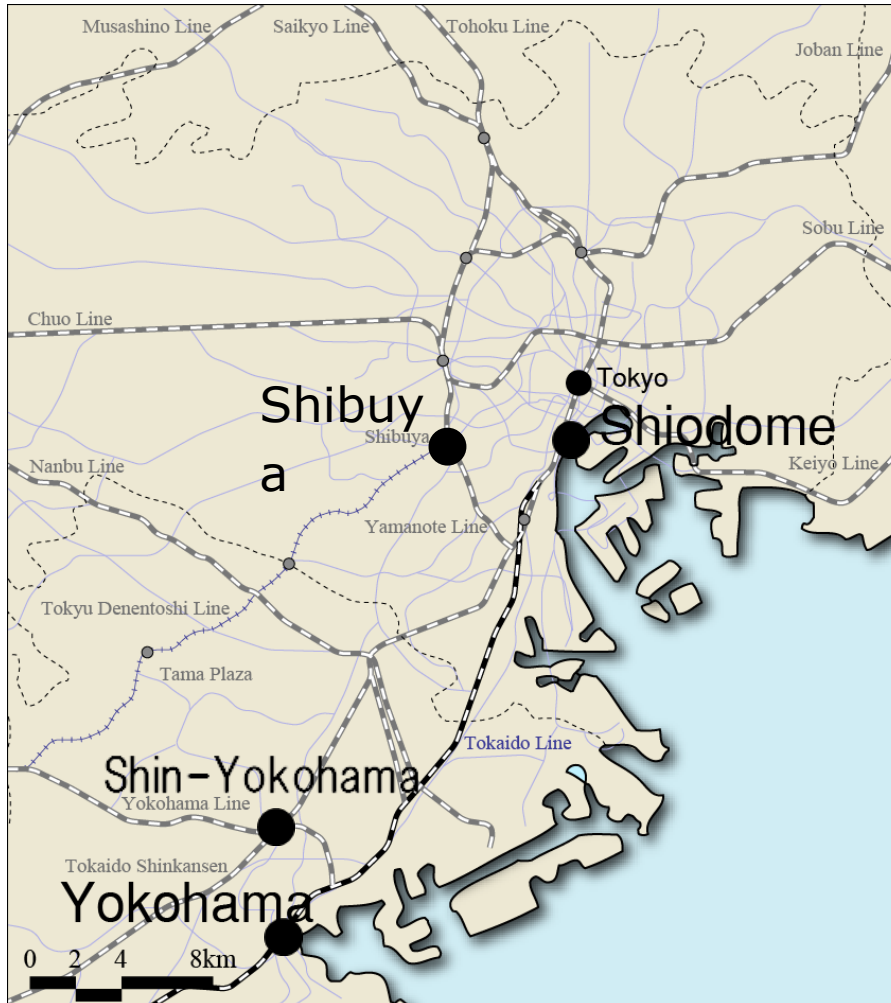
Station Integrated Urban Design

- ✓ Density Concentration
- ✓ Mixed Use
- ✓ Seamless Circulation
- ✓ Layered Public Realm
- ✓ Space Saving
- ✓ Pedestrian Prioritization
- ✓ Car-lite
- ✓ Appropriate Incentive



3. Examples of Station Area Development Projects in Japan

3. Examples of Station Area Development Projects



Tokyo Station Area (Tokyo)



Minato Mirai 21 (Yokohama)

Source: asahi.com

3. Examples of Station Area Development Projects

Minato Mirai 21 Area

The site was former shipyard site of 76ha, and with the reclamation land, the total of 186ha was developed as an integrated urban development.

Before



After

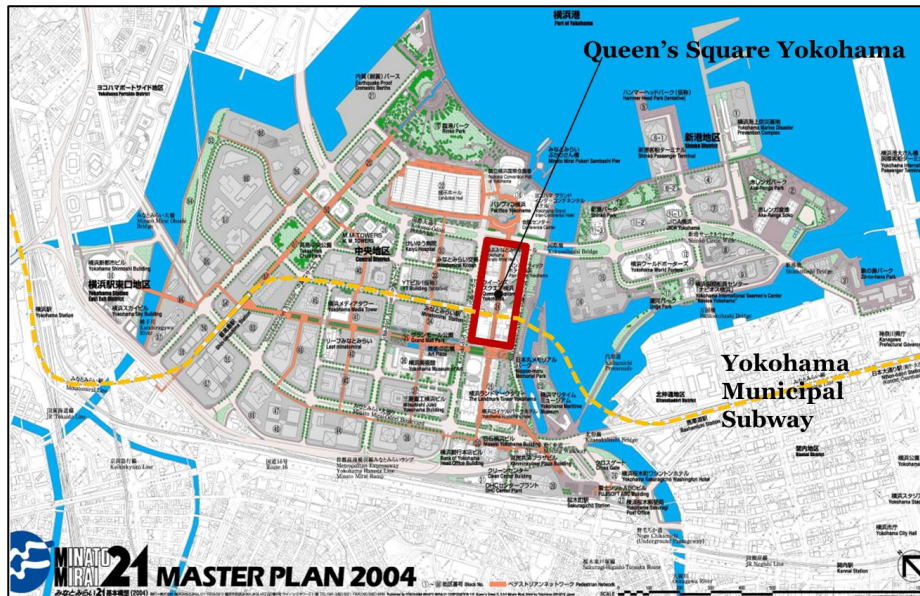


3. Examples of Station Area Development Projects

Queen's Square Yokohama

[Completion year]	1997
[Business operator]	T-R-Y90 joint venture (Tokyu Corporation, Sumitomo Corporation, etc.)
[Total floor area]	Approx. 496,000 m ²
[Railway facility]	Minatomirai Station, Yokohama Municipal Subway (Opened in 2004)
[Number of passengers]	Approx. 60,000 persons/day

Location map



Source: City of Yokohama

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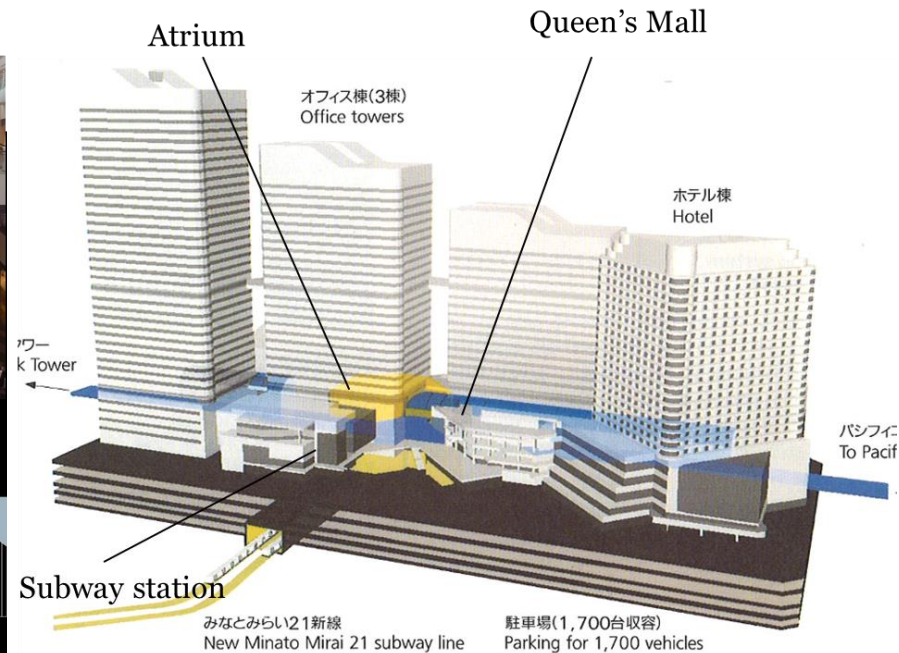
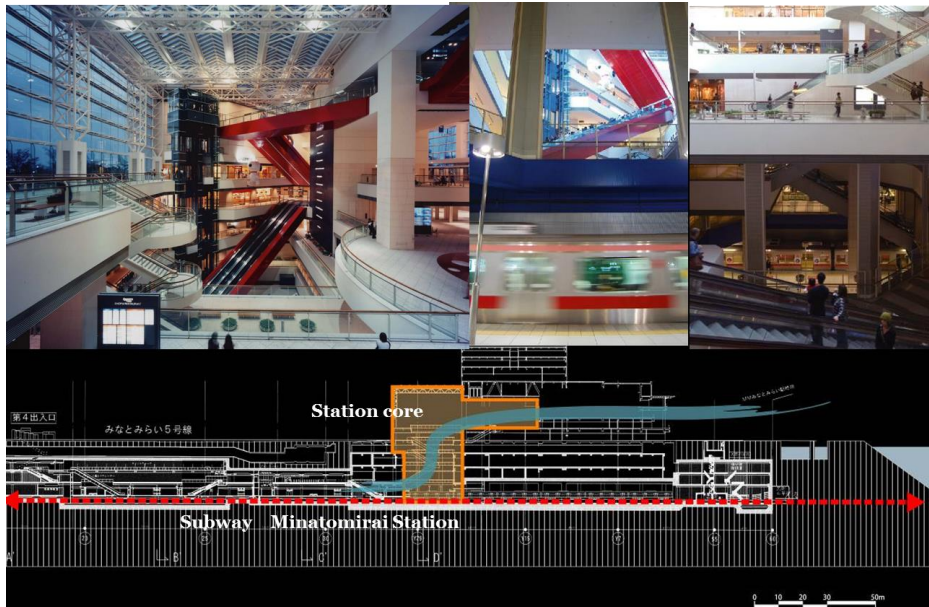


3. Examples of Station Area Development Projects

The station and building are integrated through the atrium (station core)

The integration of the three facilities of the subway station, the atrium, and the mall facilitates the smooth movement of people.

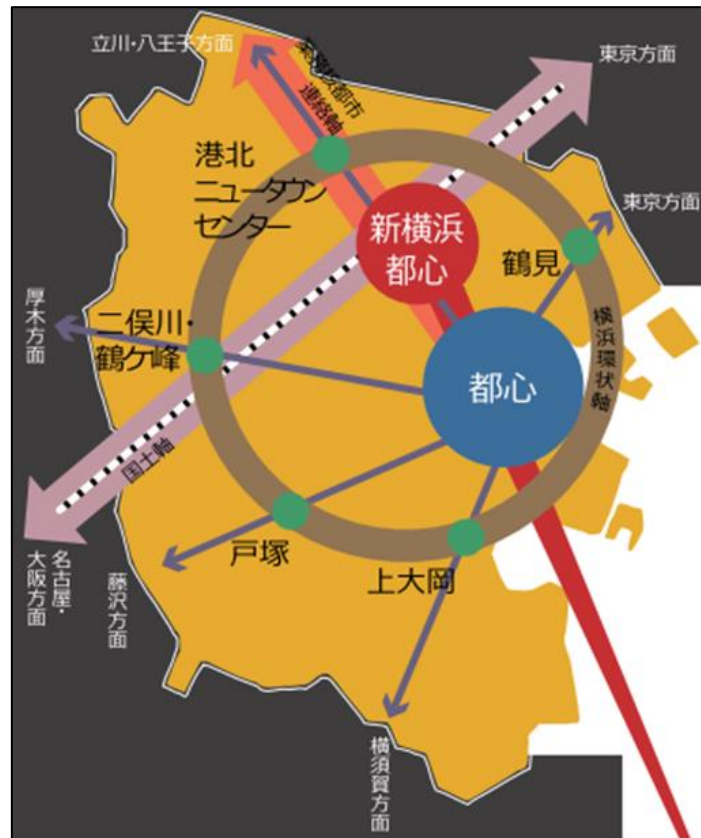
As they form entrances to the Minatomirai district, these facilities create a lively atmosphere in the city.



3. Examples of Station Area Development Projects

Sin-Yokohama

[Project period] 1964-
[Project type] Land readjustment project
[Plan type] Redevelopment district plan



Before



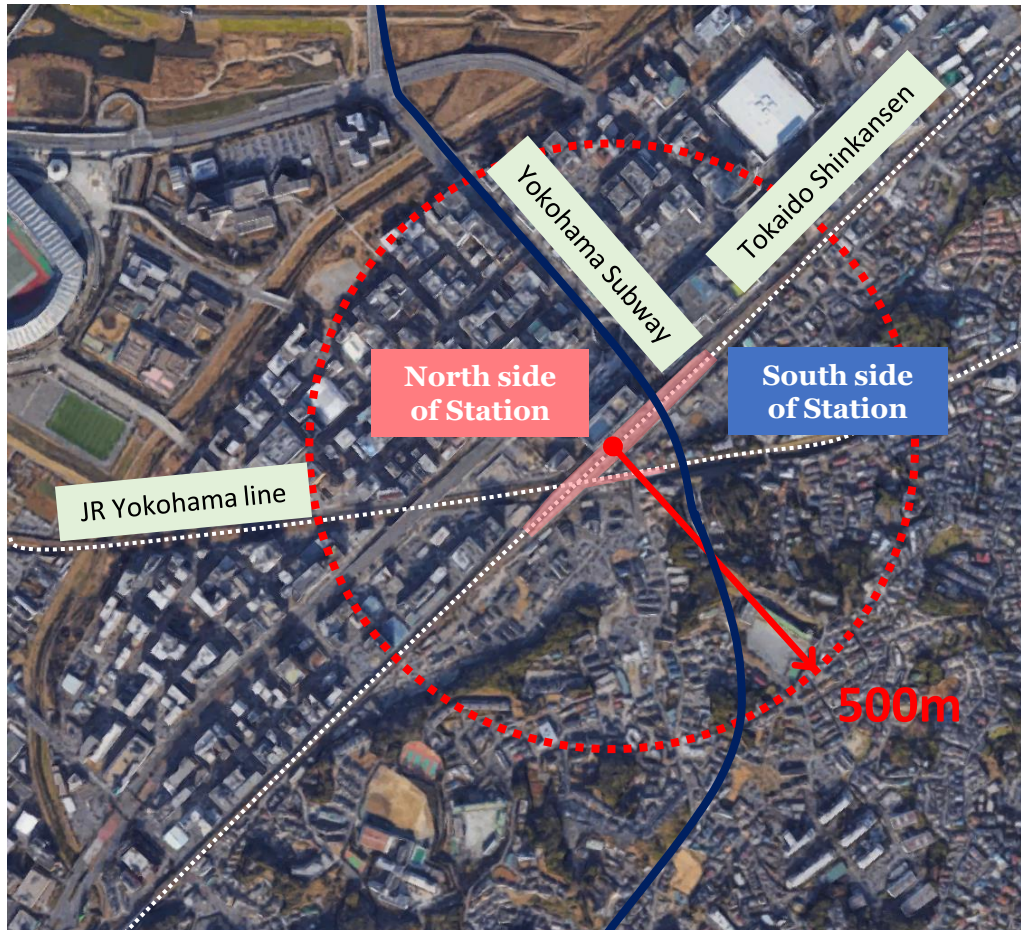
After



3. Examples of Station Area Development Projects

The recent situation of development area around Shin-Yokohama Station

- The north side of the station has been conducted urban developments.
- The south side has been utilized for detached housing.



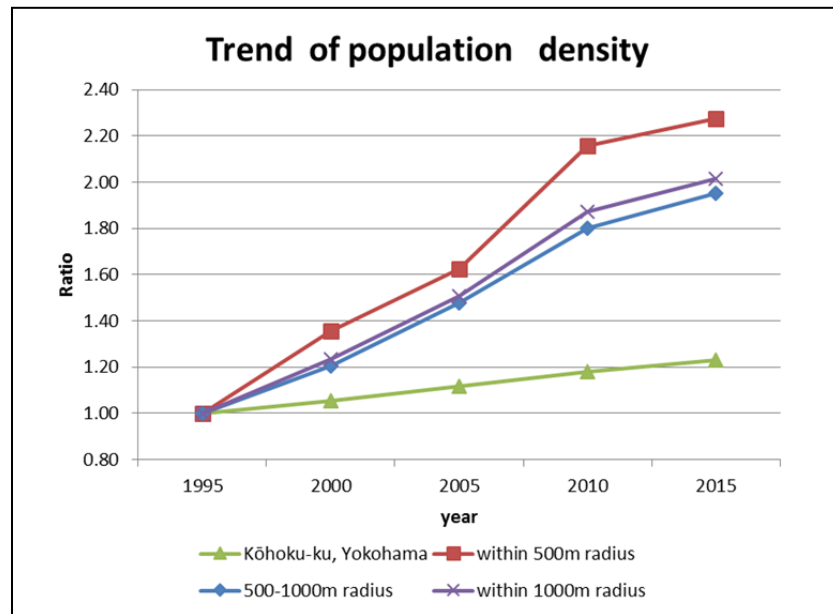
North side of Station



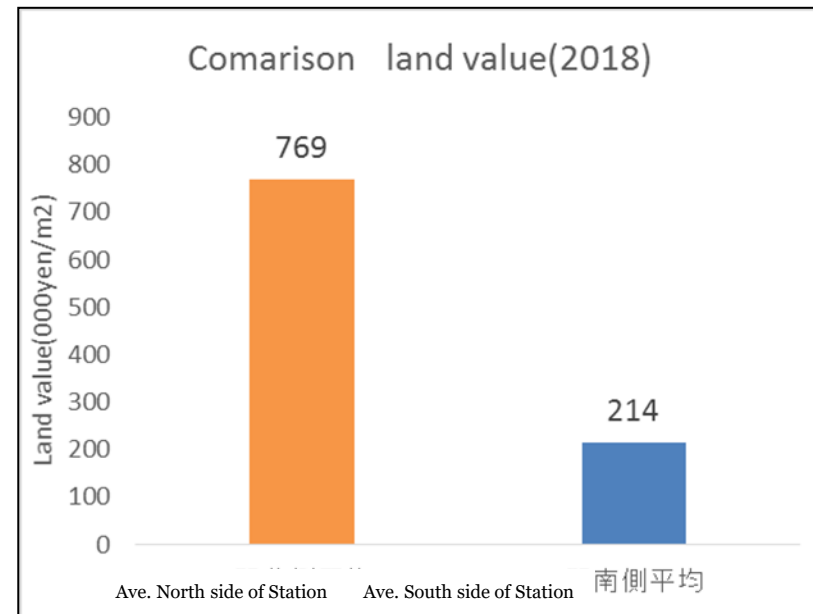
South side of Station

The Point of the development around Shin-Yokohama Station

- In the area around Shin-Yokohama Station, which opened in conjunction with opening of Tokaido Shinkansen in 1964, the infrastructure and urban developments have been conducted in the north side of the station, while the south side has been utilized for detached housing.
- As a result, as at 2018, the average land price in the north side, where the infrastructure and urban developments have been done well, is 3.6 times as high as the one in the south. This implies that for maximizing land's potential, it is significantly important not only to develop station but also to develop infrastructure around the station.
- In addition, the population increase ratio in the area exceeds the one of the average of the whole city. It indicates the further potential of the area with the station and the station area development.



Source :
National
Tax
Agency,
Japan



3. Examples of Station Area Development Projects

SHIN-YOKOHAMA HSR Station Project (CUBIC PLAZA)

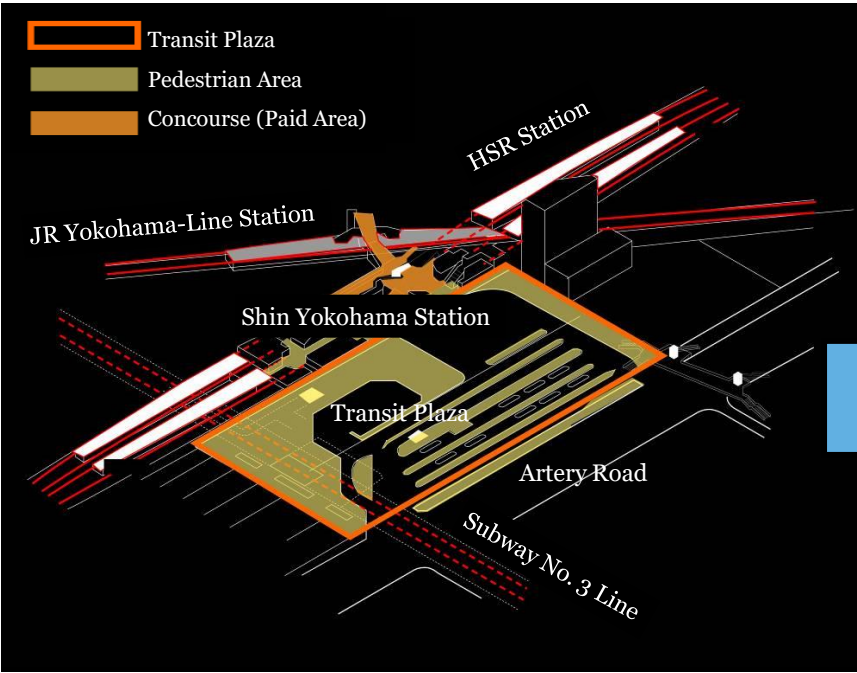


(1 HSR + 2 Railways + 1 Bus Terminal)

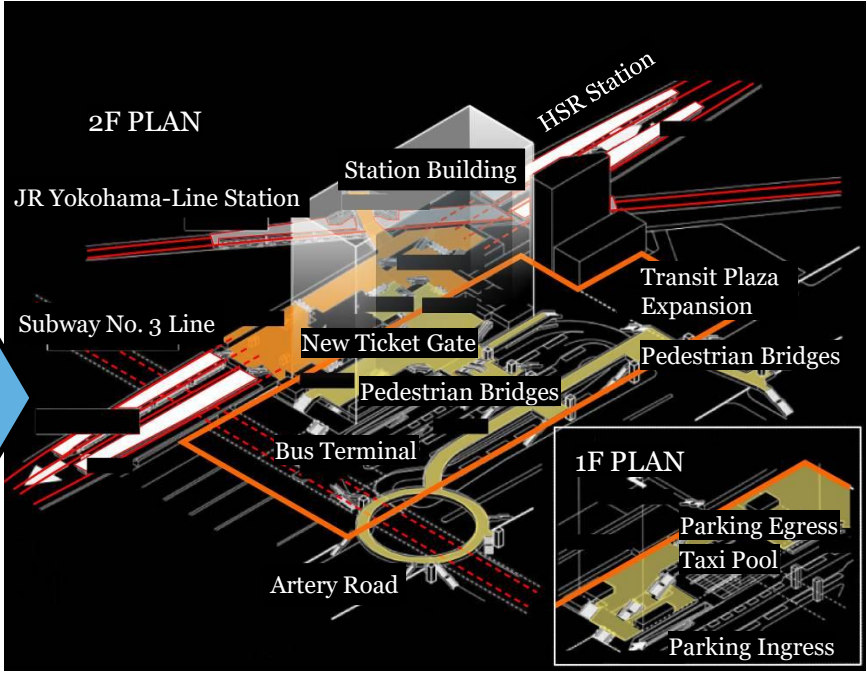
3. Examples of Station Area Development Projects

SHIN-YOKOHAMA HSR Station Project (CUBIC PLAZA)

BEFORE **AFTER**



1F PLAN: Only Transit Plaza is located, however pedestrian network was not sufficient, and the rail company's land was not highly utilized.



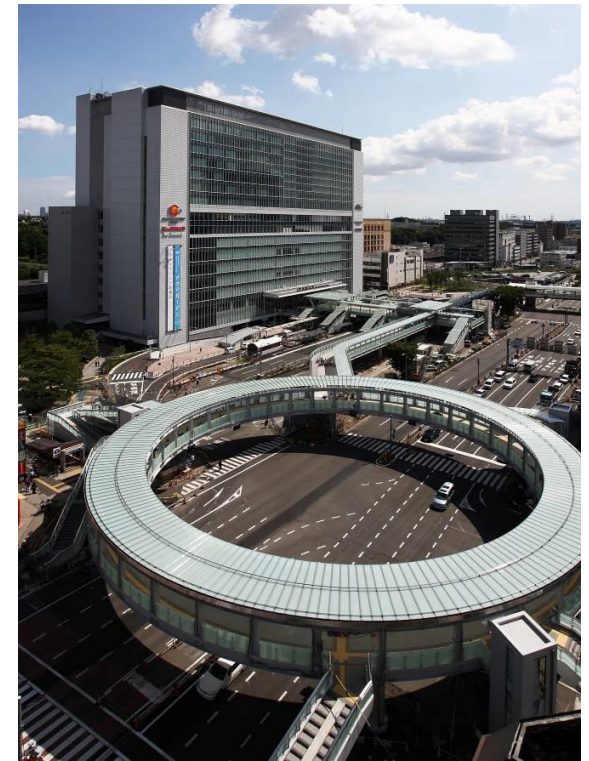
1F/2F PLAN: Transit Plaza was expanded, and the new building was developed above the Transit Plaza and a part of HSR tracks

3. Examples of Station Area Development Projects

SHIN-YOKOHAMA HSR Station Project (CUBIC PLAZA)



Seamless Connection to the HSR Station



Bridge Network

3. Examples of Station Area Development Projects

Shiodome Sio-Site

[Project period] 1995-2007
[Site area] Approx. 30.7 ha
[Project type] Land readjustment project
[Plan type] Redevelopment district plan

Location map



BEFORE



AFTER



3. Examples of Station Area Development Projects

Master plan



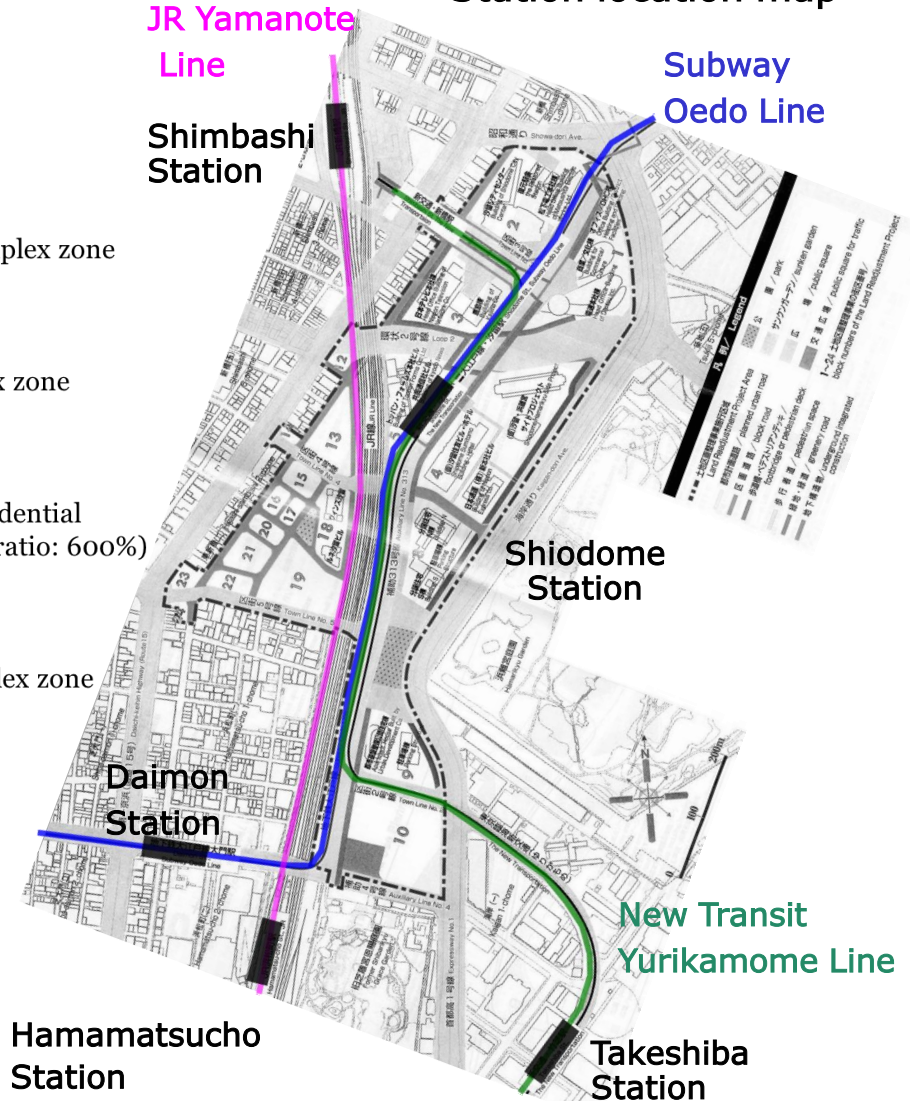
Business/commercial complex zone
(Floor area ratio: 1,200%)

Culture/exchange complex zone
(Floor area ratio: 900%)

Business/commercial/residential
complex zone (Floor area ratio: 600%)

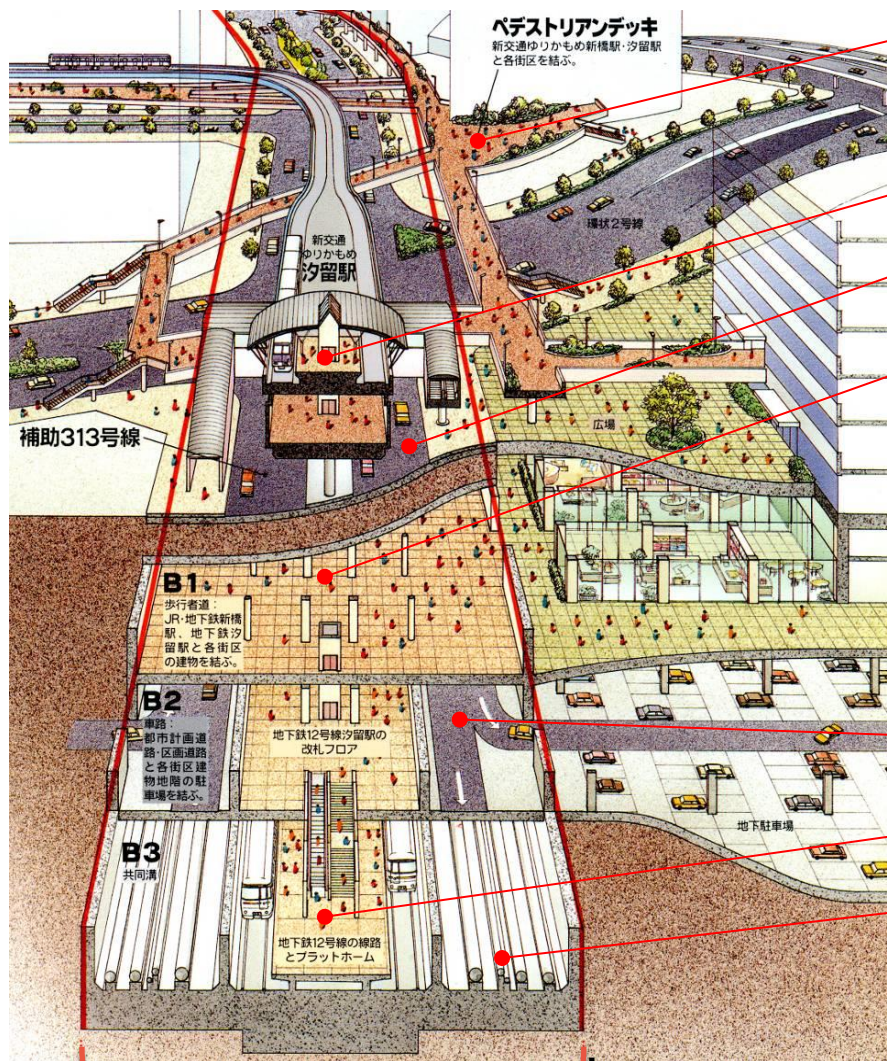
Residence/business complex zone
(Floor area ratio: 900%)

Station location map



3. Examples of Station Area Development Projects

Shiodome Station has integration of railway facilities and urban infrastructure (by public and private partnership (PPP))



Pedestrian walkway

Yurikamome Shiodome Station

Road

Underground passageway



Underground parking network road

Subway Oedo Line Shiodome Sta.

Utility corridor

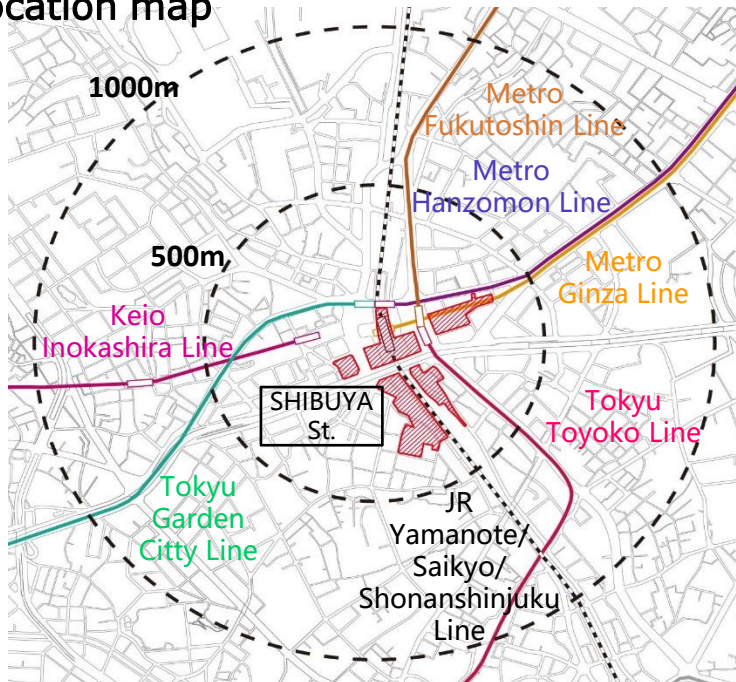
Private lands were to connect to public facilities, instead of obtaining the incentive (FAR bonus).

3. Examples of Station Area Development Projects

SHIBUYA Station District

[Project period] 2008~2027
[Site area] Approx. 10ha
[Project type] Land readjustment project
Urban redevelopment projects
[Plan type] Special urban renaissance district

Location map



Current Situation



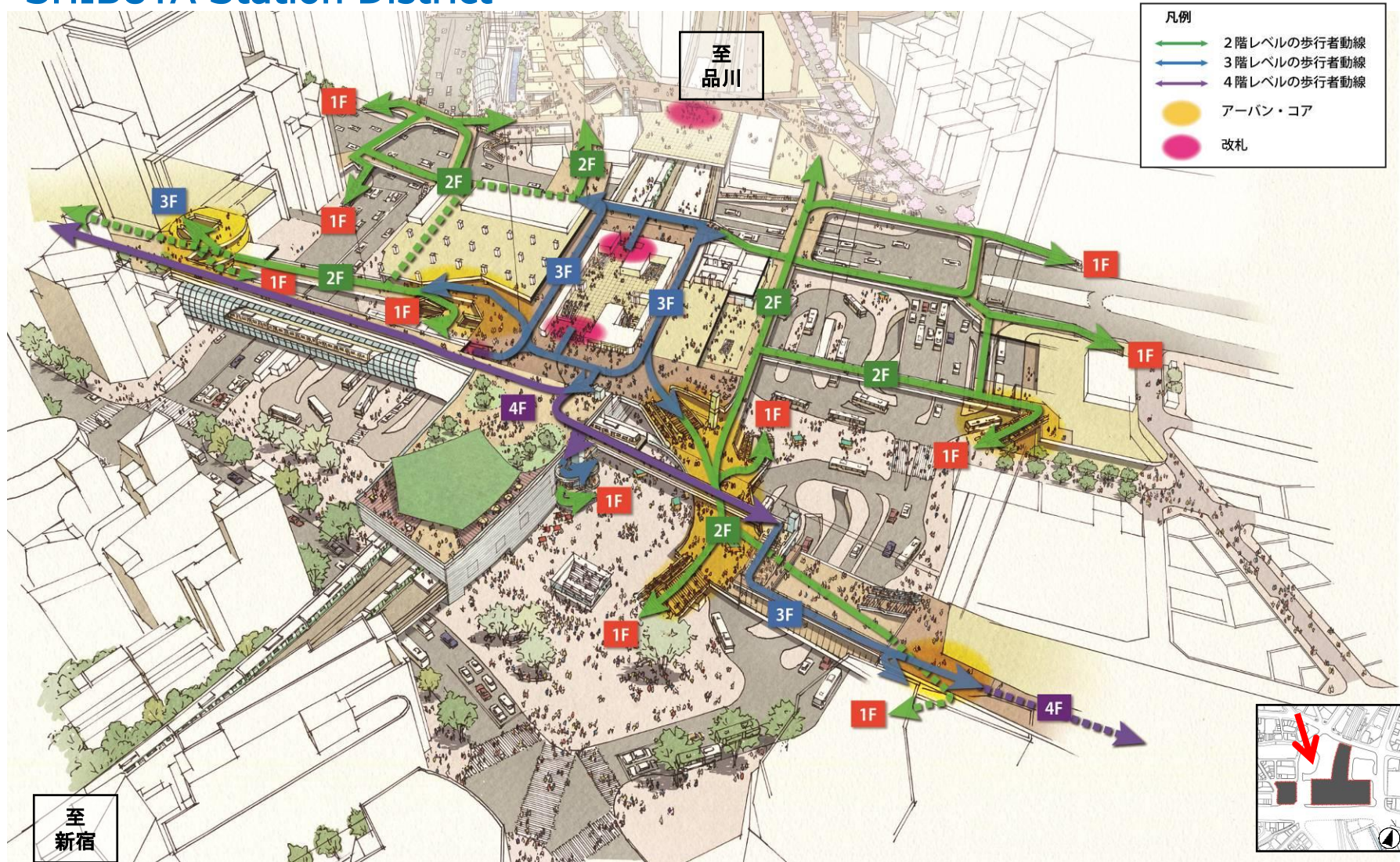
Future Plan



2. Examples of TOD Projects in Urban Center

Enhancing Connectivity of Districts through Rail Integrated Urban Development

SHIBUYA Station District



Future Image of Upper Level Connection (2nd, 3rd, 4th floors)

SHIBUYA Station District

Integration of 3 Project Types

1. Rail/Station Construction & Improvement

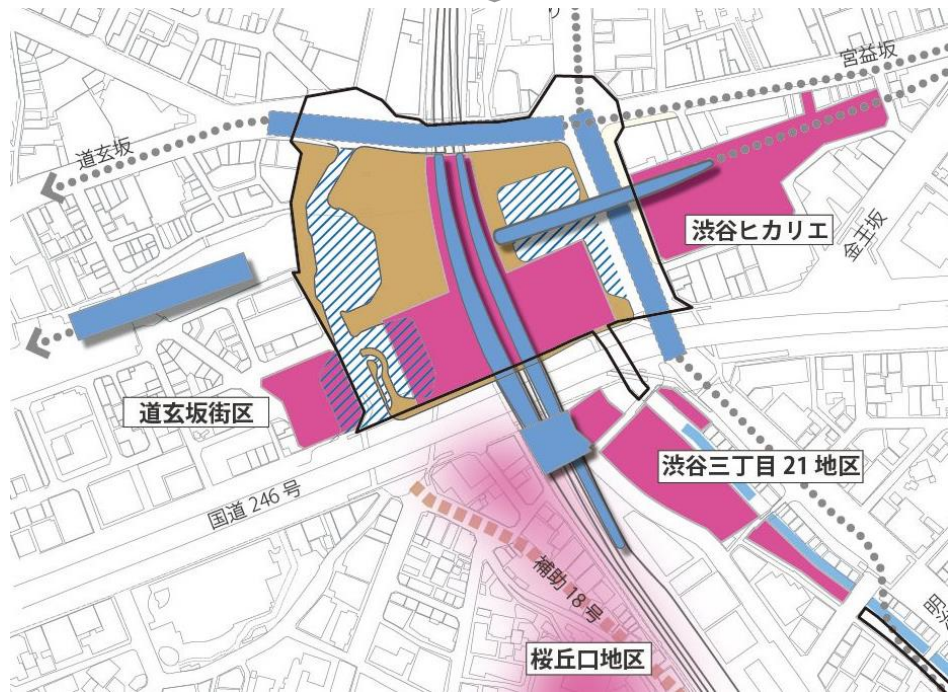
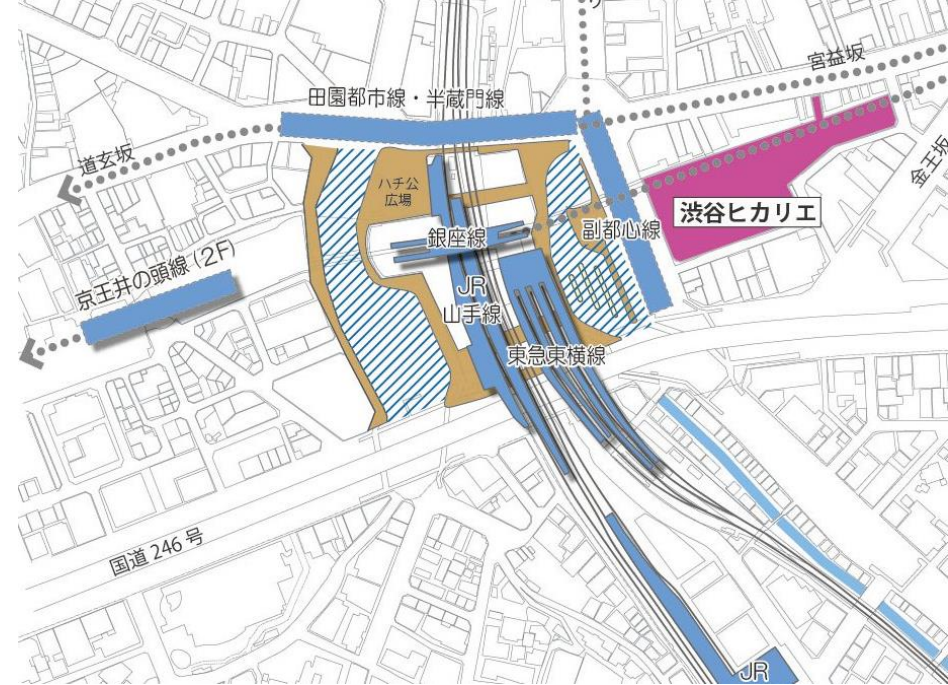
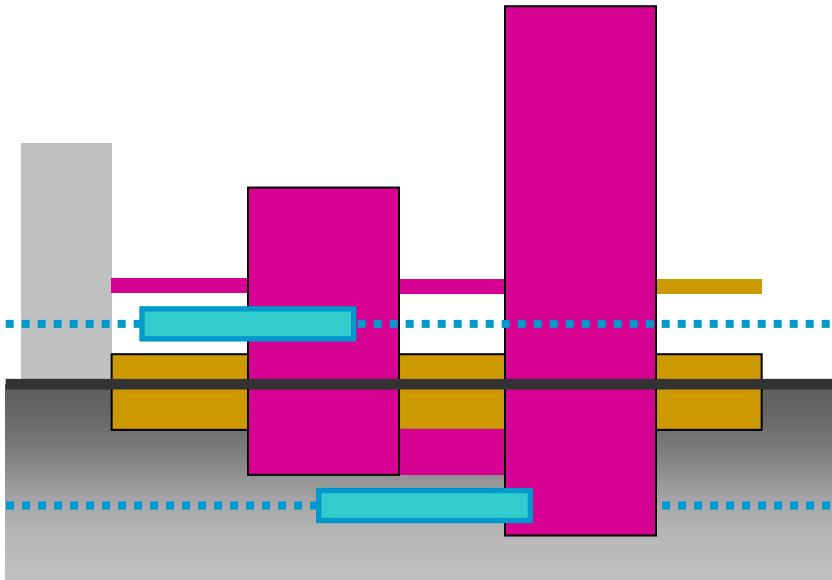
- JR lines, TOKYU line, Metro lines

2. Infrastructure Improvement

- Land Rearrangement led by UR
- Road/Infra Improvement by TMG, NRA

3. Real Estate Development

- JR, TOKYU, Metro, Private Developers, Other Landowners

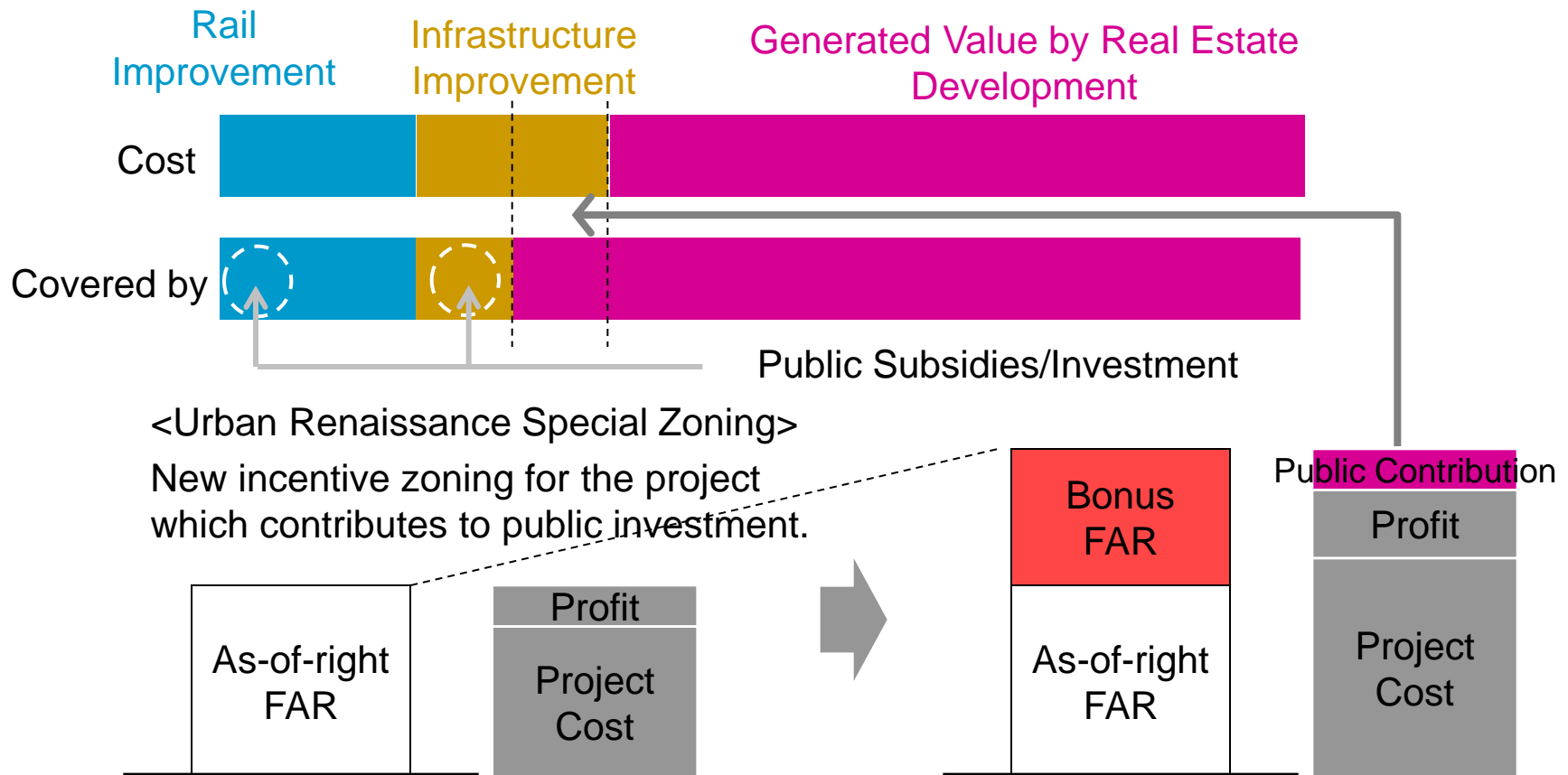


Basic Project Scheme

1. Project Cost (all numbers are roughly estimated, not officially announced)

- Rail Improvement : 100 billion JPY (1 billion USD)
- Infrastructure Improvement : 60 billion JPY (0.6 billion USD)
- Real Estate Development : 300 ~ 400 billion JPY (3 ~ 4 billion USD)

2. Public Investment utilizing Generated Value by Private Redevelopments





Thank you for your attention.

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