Accessible Mobility
- Features of Station Area Development in Japan

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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

Kyoto State Guest House

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

- Population currently $3.5x$ that of 1930

Graph showing population growth and passenger ridership from 1930 to 2020.
1. Metropolitan Structure and TOD in Japan

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

Rate of change: (2005-1975)/1975

Source: Population Census, Ministry of Internal Affairs and Communications
TOKYO - An TOD Agglomerated City

TOKYO 23 Wards: Distance to the nearest Rail Station

A network of 800m radius walk-able areas from each railway station in Tokyo Metropolitan Area
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

<table>
<thead>
<tr>
<th>City</th>
<th>Public</th>
<th>Car</th>
<th>Walk + Cycle + Others</th>
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<tbody>
<tr>
<td>Tokyo</td>
<td>50</td>
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<td>Osaka</td>
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<td>Paris</td>
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</tr>
</tbody>
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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)
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)

Growth of central districts

Development along a railway line
(Residential area)

Suburbs
(Leisure, universities, etc.)

Urban center
(Business / commercial / culture)
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)
Population density and transportation energy consumption per person in cities

Cities in Asia are highly dense compact cities and the amount of gasoline consumption per person is much less.

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

Administrative Cost increase as Population Density decrease

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**: Symbolic station building and city development
- **1900**: Department stores at private railway terminals
- **1920**: Emergence of “public station” – proliferation of station buildings
- **1950**: Expansion and development of underground malls
- **1960**: Active redevelopment in front of stations
- **1970**: New era of integrated station area development
- **1990**: NOW
1. History and Features of Station Area Development in Japan

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。

Nishtetsu Fukuoka Terminal
Shinyokohama Station
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 Itchyoume Station
1. History and Features of Station Area Development in Japan

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 Buinlding 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.
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 m²
[Railway facility] Minatomirai Station, Yokohama Municipal Subway
(Opened in 2004)
[Number of passengers] Approx. 60,000 persons/day

Location map

Source: City of Yokohama
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 forms 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

Source: YOKOHAMA CITY/MLIT
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.
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

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

AFTER

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
Shiodome Sio-Site

[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

Station location map

- JR Yamanote Line
- Subway Oedo Line
- Shimbashi Station
- New Transit Yurikamome Line
- Shiodome Station
- Hamamatsucho Station
- Daimon Station
- Takeshiba Station

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%)
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

**Current Situation**

**Future Plan**
2. Examples of TOD Projects in Urban Center

Enhancing Connectivity of Districts through Rail Integrated Urban Development

**SHIBUYA Station District**
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

<Urban Renaissance Special Zoning>
New incentive zoning for the project which contributes to public investment.
Thank you for your attention.