Case Study on Station Redevelopment in Japanese Railways

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4. Conclusions
1. Overview of Japanese Railway Companies

<table>
<thead>
<tr>
<th>Types of Railways</th>
<th>No of Companies</th>
<th>Operating Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>JR Companies (Former National Railway)</td>
<td>6</td>
<td>20,127 km</td>
</tr>
<tr>
<td>Major Private Railways</td>
<td>16</td>
<td>2,917 km</td>
</tr>
<tr>
<td>Semi-Major Private Railways</td>
<td>5</td>
<td>110 km</td>
</tr>
<tr>
<td>Metros</td>
<td>10</td>
<td>735 km</td>
</tr>
<tr>
<td>Regional Railway</td>
<td>115</td>
<td>3,608 km</td>
</tr>
</tbody>
</table>

Total Land area : 377,972 km$^2$
P: 128 million
Non-Transportation Business Revenues

Major Private Railways

- **Tokyu Corporation**
  - Transportation: 16%
  - Non-transportation: 84%

- **Odakyu Electric Railway**
  - Transportation: 30%
  - Non-transportation: 70%

- **Keio Corporation**
  - Transportation: 30%
  - Non-transportation: 70%

JR Companies

- **JR East**
  - Transportation: 36%
  - Non-transportation: 64%

- **JR Central**
  - Transportation: 29%
  - Non-transportation: 71%

- **JR West**
  - Transportation: 34%
  - Non-transportation: 66%
Before the Station Development

- Dark Pathways
- Low Visibility Signs
- Old Type Toilets
- Kiosk
- Coin Lockers…
2. Background of Station Development

Deregulation
- The former JNR was prohibited to doing commercial business except kiosk, advertising, and hotels to prevent squeezing the private sector. JNR cannot be an investor of any other business.
- In 1959, JNR was deregulated to invest to transportation relating companies and terminal station buildings to compensate the rising debt.

Privatization of JNR
- JNR was privatized to JR companies in 1987.
- JR companies are not prohibited their commercial business.

Changes of Station’s Roll
- According to the economic development, the lifestyle of passengers have changed and there were needs for improving station facilities more comfortable and convenient place for passengers who is the costumer of railway company.
Station Developments in Scale

- In-Station Development
  - Unutilised Space
  - Remove the non-profitable facilities
  - Creating Space above the tracks

- Large Scale Development
  - Sharing the cost by benefit principle
In-Station Development - The Case of JR East

16 million passengers per day
JR East’s largest business resource

Customer perspectives

Reconstruction of optimal facility designs from scratch
= Regeneration of Stations

Enhancement of customer service
Integration of railway and lifestyle service businesses

Creation and vitalization of businesses
Cooperation with community and vendors

More attractive Stations

Higher profitability from Stations
“Station Renaissance” Started from 2000

Station Renaissance is a project that aims to construct stations fit for the 21st century. The goal is not only to upgrade the functions of stations as transport nodes, but also to enhance their appeal and maximize revenues through improvements in comfort and the strengthening of their functions as service centers responding to diversifying customer expectations.

- Review of station facilities
- Commercial space creation by constructed areas, etc.
- Development and improvement of barrier-free environments
- Installation of informational signage, etc.
How they internalize Commercial Business skill?

Human Resources Development

- Non-transportation business in JR East is not successful even after the Privatization in 1987 because the employees are all trained as railway operation staff not for development business.

- Employment was divided to Railway Business and Non-Railway Business after 2003.

- Non-Railway Business employees are seconded to the developers, department stores, hotels and learn how to business.
## Station Management in JR Companies

<table>
<thead>
<tr>
<th>Facility</th>
<th>Owner</th>
<th>Operation/ Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station Square, Transportation Hub</td>
<td>Local Government</td>
<td>Local Government</td>
</tr>
<tr>
<td>Security Check</td>
<td>—</td>
<td>Railway Police &amp; Security Company</td>
</tr>
<tr>
<td>Ticketing Counters</td>
<td>Railway Company</td>
<td>Railway Company</td>
</tr>
<tr>
<td>Ticket Gates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passenger Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Platform</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building Cleaning/Maintenance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Announcements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiting Room</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EV/ ESC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toilets</td>
<td></td>
<td>Subsidiary Companies</td>
</tr>
<tr>
<td>Advertisements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shops</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shopping Center</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hotel</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
After the “Station Renaissance”

Wide Concourse and Shops on the Wayside

Friendly to Disabled Costumers

Clean Toilets

Visible Signboards and Walkable pathway

Bright and Open Ticketing Counters
After the “Station Renaissance”

Retail businesses (approx. 1,800 shops)
- Convenience stores (468 shops)
- Kiosks (438 shops)
- “Ekiben” (lunchbox) shops (101 shops)

Restaurants (approx. 600 restaurants)
- Hamburger Shops (21 shops)
- Coffee Shops (77 shops)
- Japanese noodle stands (207 shops)

(Number of shops as of Mar. 31st, 2012)
Large Scale Projects in Tokyo Metropolitan Area

(3) Shinjuku Station (South Gate)

(2) Tokyo Station Development

(1) Shinagawa Station Development

※ Includes projects under consideration
(1) Shinagawa Station Development

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of boarding passengers in 2012 (persons/day)</td>
<td></td>
</tr>
<tr>
<td>JR lines</td>
<td>330,000</td>
</tr>
<tr>
<td>Shinkansen</td>
<td>30,000</td>
</tr>
<tr>
<td>Keihin-Kyuko Lines</td>
<td>130,000</td>
</tr>
<tr>
<td>No. of platforms</td>
<td>7 Platforms, 17 Lines</td>
</tr>
<tr>
<td>Area of East Entrance land readjustment</td>
<td>13.7 ha</td>
</tr>
<tr>
<td>Project period</td>
<td>1987 – 2008</td>
</tr>
</tbody>
</table>

Before (in 1987)
Land Readjustment Project & Free Passage Project

- The cost of the readjustment project was paid by revenues gained from selling some of the land resulting from the reduction of land owned by land owners.
  
  *(Land Readjustment Project = Town Planning Scheme)*

- A 20 m-wide free passage was constructed using funds from companies in the East Entrance area who will get benefit from the free passage.
## Shinagawa Station East Entrance Land Readjustment Project

### Outline
JNRSC carried out a land adjustment project for 13.7 ha of land in total, including former rolling stock base (9.9 ha) and other nearby land. The lands for Shinagawa Station East Entrance plaza and JR buildings are secured by the land readjustment project.

### Roles of Stakeholders
- **Tokyo Metropolitan Government**
  - Approval
- **Minato Ward**
- **Shinagawa Ward**
- **Construction project owner: JNRSC**
- **JR**
- **Other Land Owners**

### Financing
35 billion yen was raised by selling reserved land resulting from the reduction of land held by land owners.

## Shinagawa Station East-West free Passage Construction Project

### Outline
A basic agreement on the free passage was concluded between Minato Ward, JNRSC, and JR East, JR Central and the Association of Shinagawa Station Over-bridge Construction consisting of leading enterprises in the area.

### Roles of Stakeholders
- **Agreement between stakeholders**
- **Minato Ward**
- **JNRSC**
- **Association (Companies in the area)**
  - Cost-sharing
- **JR East/ JR Central construction/ possession of assets**

### Financing
Borne by the Association consisting of enterprises in the East Entrance area who are beneficiaries from the free passage (Estimated about 20 Billion Yen)
Before and After of the project

Shinagawa Station East Entrance

Shinagawa Station East-West free Passage Construction Project
For the Next Development
Restructuring the Shinagawa Rolling Stock Depot
(Under Construction)

<Before>

Tokaido Line

To Tokyo

Tokaido Line (To Tokyo)

<After>

Tokaido Line

To Tokyo

Cleared Land (Approx. 14ha)
New Development in Shinagawa

- JR New Station (TBD)
- Maglev Terminal Station (2027)
- Haneda Airport Access Railway (TBD)
(2) Tokyo Station Development
Outline of Tokyo Station and Project Background

<table>
<thead>
<tr>
<th>No. of boarding passengers in 2012 (persons/day)</th>
<th>Approximately 0.4 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Lines</td>
<td>6 Shinkansen line</td>
</tr>
<tr>
<td></td>
<td>7 Conventional lines</td>
</tr>
<tr>
<td></td>
<td>1 Subway line</td>
</tr>
<tr>
<td>Area of East Entrance land readjustment</td>
<td>13.7 ha</td>
</tr>
<tr>
<td>Project period</td>
<td>1999–2013</td>
</tr>
</tbody>
</table>

- JR East could not reconstruct red brick station building by self investment because it needs huge cost.
- It was time for reconstruction for buildings around Tokyo Station.
- Tokyo Metropolitan Government and JR East agreed on “Volume Transfer” in 1999 for the station area redevelopment which enabled JR East to earn reconstruction cost from developers.
Exceptional Floor Area Ratio District System

Tokyo Metropolitan Government Installed New System for Tokyo Station Area Development

Maximum floor area-to-land ratio: 400 %

Exceptional Floor Area Ratio District
(116.7ha June, 2002)
① Reconstruction of Historical Station (Approx. 500 billion Yen)

- Tokyo Station was Reconstructed by earnings by volume transfer.
- Developers can reconstruct more profitable building by volume transfer.
② Yaesu Twin Tower Building Development (Joint Development with Developers)

On Yaesu Side, JR East implemented Station Development as Joint Development with Other Land Owners.

- JR East
- Mitsui Fudosan (Developer)
- Kashima Yaesu Development (Construction Company)
- Kokusai Kanko Kaikan (International Tourism Building)
- Nippon Oil

Image of Joint Development

Land Area: 19,660m²
Building Area: 15,000m²
Floor Space: 350,000m²
Height: 205m
Floors: 41 floors + B4 floors
Usage: Offices, Stations, Shops
Parking: 800 cars
Incentives for Station Square & Traffic Hub

Tokyo Metropolitan Government gave incentives of additional FSI to developers for providing traffic facilities.

- Enough Space for walkers
- Bus Terminal

http://www.bushikaku.net/article/28/
(3) Shinjuku Station (South Gate)
Necessity for Redevelopment in Shinjuku Terminal Station South Gate

- Shinjuku station is used by more than 3.5 million passengers per day and most busiest station in Japan. Shinjuku South Gate was congested by the lack of space and facilities for transferring other transportation.

- JR East and road administrator worked together and for constructing transportation hub. Bus terminals, taxi pools, parking, station facilities and a station building were the constructed integrally above the active railway tracks.

- New artificial ground floor was constructed above the tracks for increasing space. JR East could construct the higher building by using the volume of newly constructed artificial ground floor.
Traffic Hub (Road Facility) on the tracks
Transportation Hub above the Station

4th Floor Highway Bus

3rd Floor Taxi pool

2nd Floor Station & Open Space

Shinjyuku Transportation Hub (Above the Railway Tracks)

Culture Center

Upper Floors: Offices

Lower Floors: Commercial

Basement: Parking
Non Railway Business Income

7% (1987)

34% (2011)

Total operating income (inner circle) ¥360.0 billion

Total operating revenues (outer circle) ¥2,532.1 billion

FY2011, 72 consolidated subsidiaries
Implications for India

- Clear Vision and Goals for Station Development
- Human Resource Development
- Financing under the Benefit Principle
- Sharing the vision with Stakeholders by Committee or Meetings
Thank you