



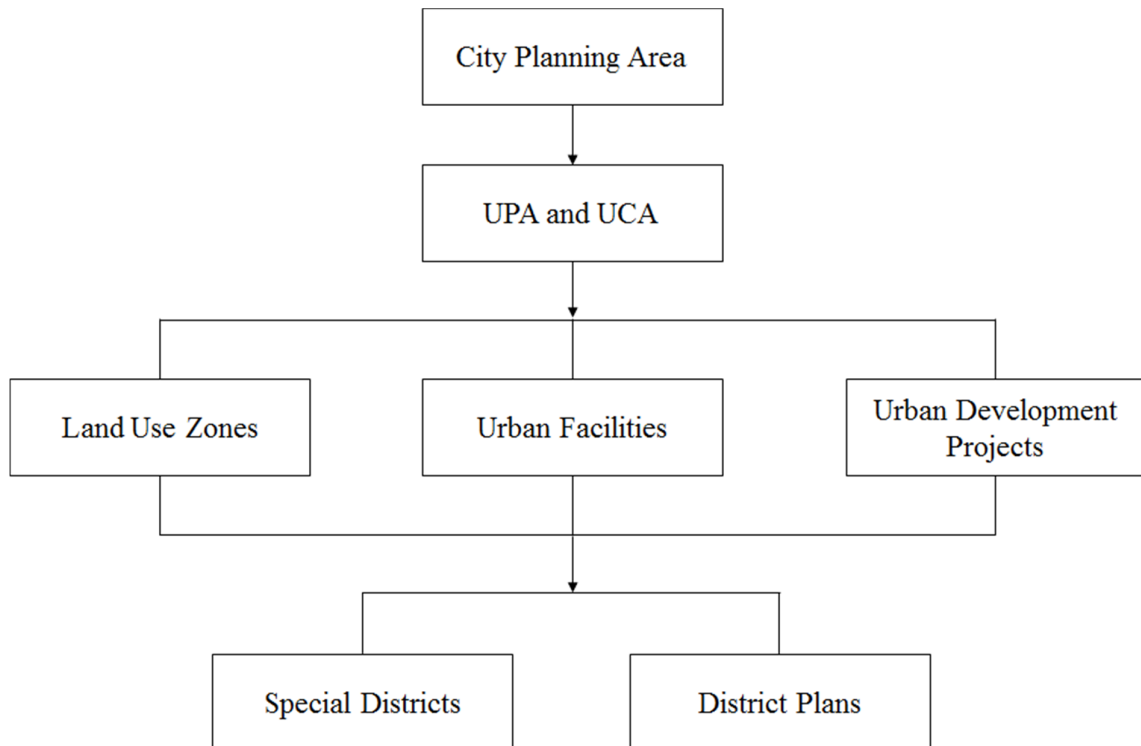
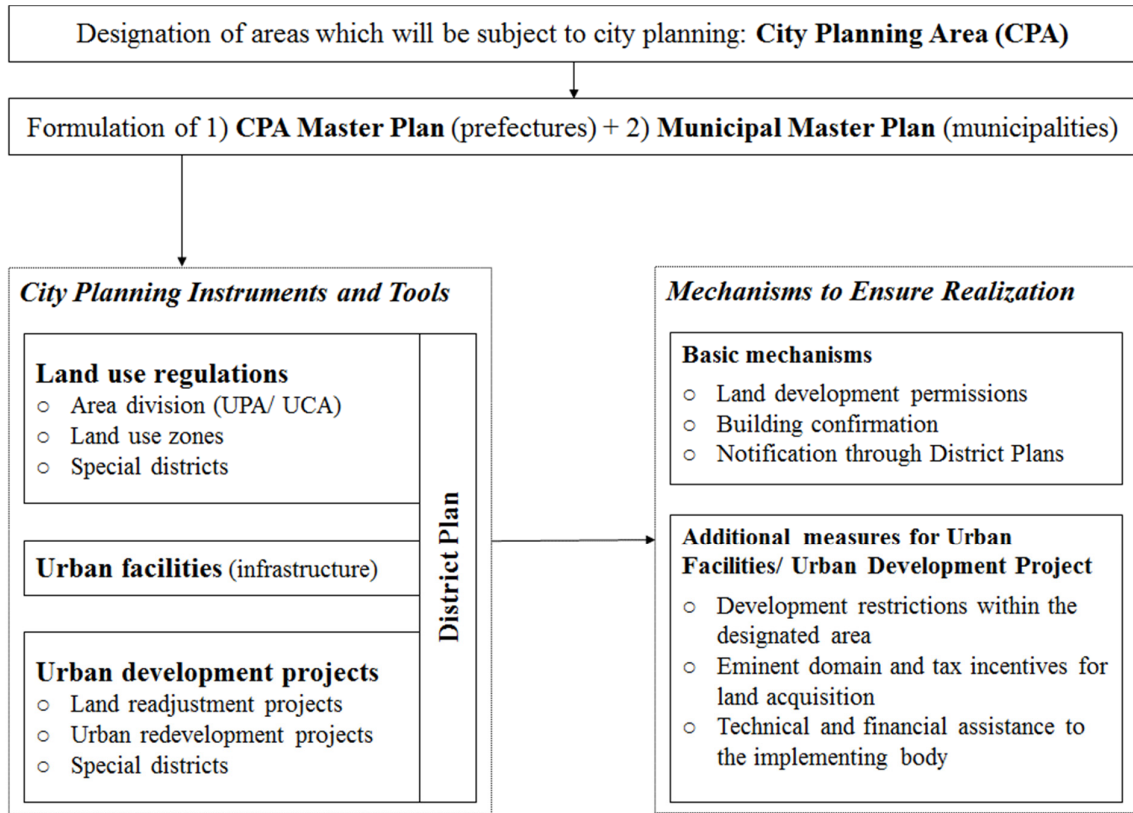
May 2017

10 Things to Know about City Planning in Japan

10 Things to Know about City Planning in Japan

Tokyo Development Learning Center, The World Bank Group

OVERALL FLOW OF CITY PLANNING PROCESS IN JAPAN AND OVERLAY OF PLANS



1. City Planning Law

都市計画法

The 1968 New City Planning Law is the current active city planning law in Japan, the first major revision of the law since first passed in 1919. The objective of the Law is to promote the sound development and orderly improvement of cities by stipulating the details of city planning and decision procedures. As urban sprawl became prevalent in the suburbs after the first stipulation of the Law, it was revised in 1968 to deal with issues in urban fringe areas and suburbanization and to primarily focus on controlling excess land conversion from rural to urban. While under the 1919 Law the ministry at the national level held all planning powers, the 1968 Law enabled considerate delegation of planning powers to prefectural and municipal governments. The following are key items covered in the City Planning Law:

- City Planning Area, Urbanization Promotion Area and Urbanization Control Area (**see p.3**)
- CPA Master Plan (Policies on Improvement, Development and Conservation) (**see p.4**)
- Land Use Zones and Special Districts (Chiiki Chiku) (**see p.5**)
- Urban Development Project (**see p.6**)
- Land Development Permission (Kaihatsu Kyoka) System (**see p.9**)
- Urban Facilities and City Planning Decision Procedure (Toshi Keikaku Kettei) (**see p.7 and p.10**)

Since 1968, the City Planning Law has evolved over the years, accommodating emerging needs by introducing new schemes.

- **District Plan (Chiku Keikaku)** is one of the most major additions introduced in 1980 to address the accelerating problems of urban sprawl, designed to allow more detailed planning control over urban areas, empowering local governments to impose detailed restrictions on development activities than allowed by the zoning and building standard systems.
- **Special District Plan for Redevelopment (Saikaihatsu Chiku Keikaku)** was stipulated in 1988 against a backdrop of an era of real estate boom, and large scale redevelopment projects were planned to convert former industrial land. This particular scheme was created to provide incentives and tools for developers to promote such redevelopment that have sufficient land for roads, parks and other urban facilities.
- **Productive Greenery District (Seisan Ryokuchi)** was introduced in 1992 to designate and preserve certain agricultural land when tax rate for agricultural land inside urban areas was raised to be equivalent to that of urban land.
- **Quasi City Planning Area** was introduced in 2000 aiming to strengthen development restrictions outside of City Planning Area, and **Public Participation** was also introduced in the same year to move away from the rather statutory requirement to “inform” towards inviting public participation in planning decisions.
- Other changes include the stipulation of **Landscape District in 2004**, and the **Strengthening Regulations on Large-Scale Visitor-Attracting Facilities in 2006** to regulate development of large facilities particularly in urban fringe and suburban areas.

2. City Planning Area, Urbanization Promotion Area and Urbanization Control Area

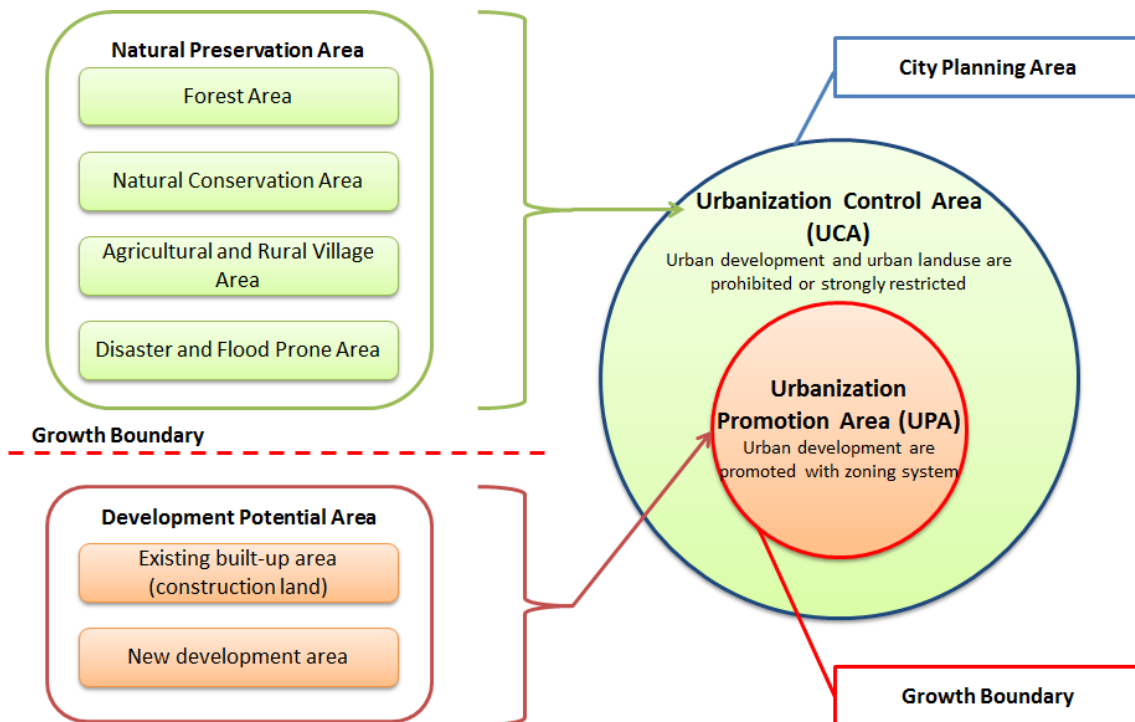
都市計画区域、市街化区域、市街化調整区域

City Planning Area (CPA): CPA can be designated for land that meets conditions for population, number of employees, etc. that require integrated urban improvement, development and preservation in due consideration of both current and future natural and social conditions. CPA is composed of Urban Promotion Area (UPA) and Urbanization Control Area (UCA).

Urbanization Promotion Area (UPA): UPA can be designated for land which will be urbanized within a designated period (approximately 10 years). UPA and UCA classification is primarily based on the following criteria: potential for future urban growth and expansion, urban service coverage, and natural preservation considerations.

Urbanization Control Area (UCA): UCA can be designated for forest area, natural conservation area, agricultural and rural village area, disaster and flood-prone area, and other preservation area. Any construction and urban development activities without permission are restricted within UCA. Land conversion from agricultural to urban is not permitted within UCA under Agricultural Land Law.

Figure 1 Areas for Urban Development and Control Stipulated by Law



Source: The Urban Planning Formulation and Management Capacity Development Project (CupCup), JICA

3. Master Plan (City Planning Area Master Plan and Municipal Master Plan)

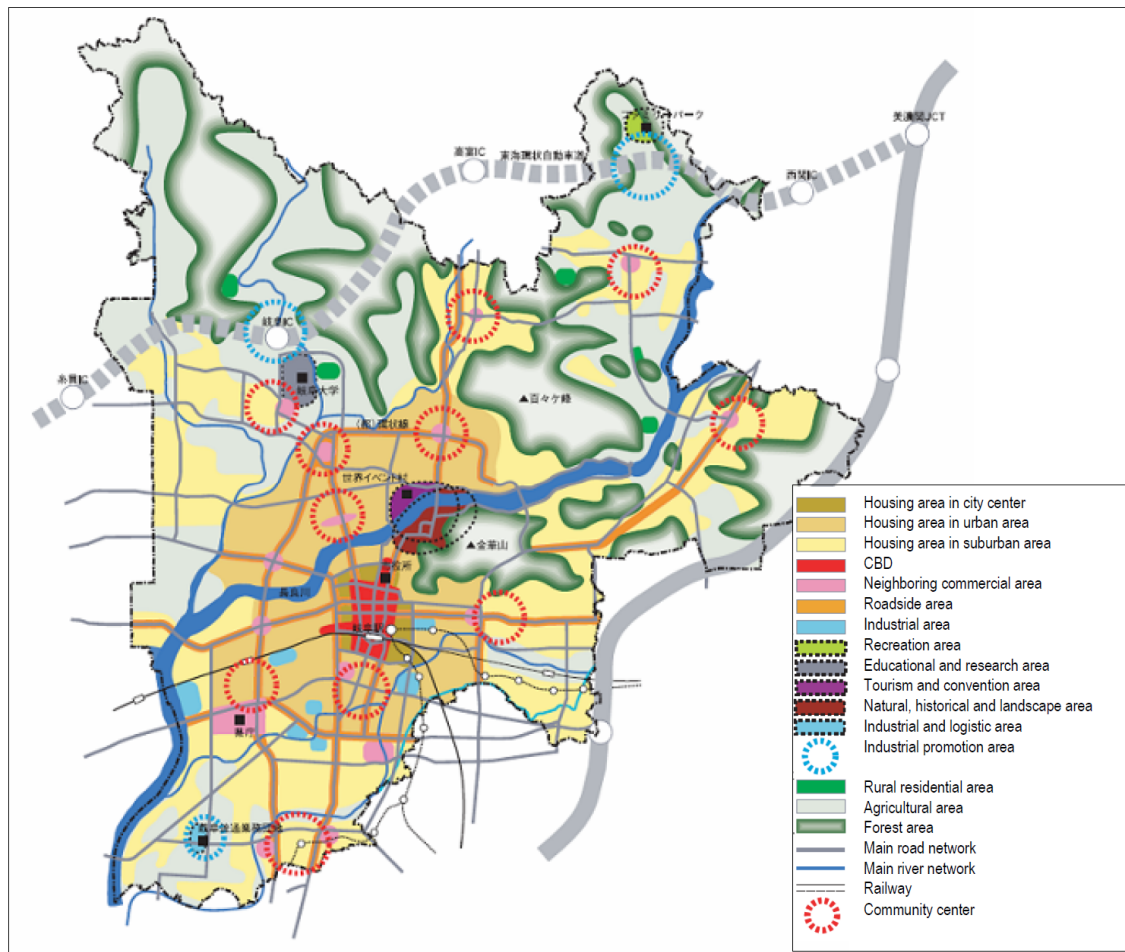
マスタープラン (整備開発保全の方針、市町村マスタープラン)

A Master Plan is a document/ map which embodies the future development vision in urban planning. In Japan, there are two levels of legislated master plans under the City Planning Law:

- City Planning Area Master Plan (prepared by prefectural government)
- Municipal Master Plan (prepared by the municipal government)

These Master Plans provide the overall direction of the development of the area, and principles that specific city planning instruments to follow, including urban facilities and development projects. These Master Plans do not have direct control over land use restriction, but provides guidelines for urban planning to set forth concrete land use restrictions.

Figure 2 Conceptual Diagram on Land Use of Gifu City as part of the Municipal Master Plan



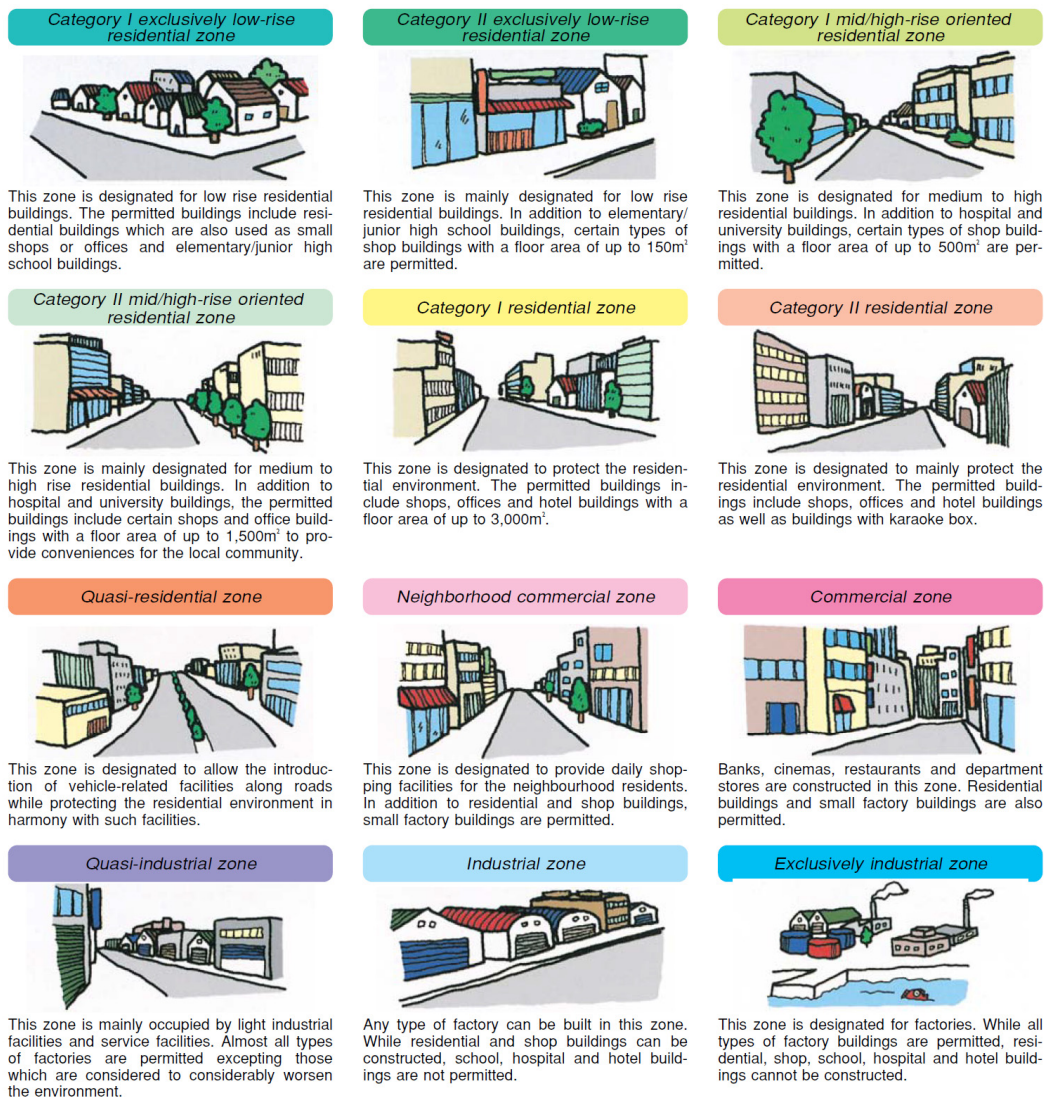
Source: Gifu City, Gifu Prefecture, Japan

4. Land Use Zones

用途地域制度

Land use zones is an instrument which regulates the use, density and form of buildings in guiding land use, and must be designated in the entire Urbanization Promotion Area (UPA). Based on designated use zone by block, other indicators such as Floor Area Ratio (FAR), Building Coverage Ratio (BCR)¹, and maximum building height are designated for each use zone to control volume of buildings of each block. **It is pro-development in nature, that is, development which conforms to these land use zones are in principle permitted by default.**

Figure 3 Land Use Zone Development Image by Category



Source: "Introduction of Urban Land Use Planning in Japan" (MLIT, 2007)

¹ FAR is the ratio of a building's total floor area (zoning floor area) to the size of the land (site) area upon which it is built. BCR is the ratio of the building area divided by the land (site) area. Building area means the floor space of a building when looking down at it from the sky.

5. Urban Development Projects

市街地開発事業手法

Urban Development Project schemes enable the public and private sector to carry out necessary development projects to serve public interests through the provision of infrastructure and service delivery. The objectives of having these schemes are to: enhance land use efficiency, consolidate fractioned land ownership and ensure efficient development of roads etc. There are various schemes² in place to enable such actions, such as using exchange and conversion of land rights, or acquiring the entire land within the project area. Some projects involve elements such as: development of business, construction of commercial and residential facilities, development of new towns, establishing industrial zones in suburban areas and thereby dispersing population and industries, reinforcing buildings to be resilient, and securing roads and parks for evacuation purposes.

Table 2 Comparison of Main Urban Development Projects Schemes

Schemes	Land Readjustment Project	Urban Redevelopment Project	New Residential Area Development Project
Measure	Replotting: exchanging rights from one land to another.	Right conversion: exchanging rights from land to building floor and joint ownership of land. Right of compulsory expropriation.	Whole purchase including the right of compulsory expropriation
Objective	Development of Urban Facilities Higher added value to land	Development of fire-resistant building Development of Urban Facilities Rational and sound high utilization of land	Large-scale development of housing with livable environments to ensure provision of housing for all, particularly in high density built-up areas
Legal Basis	Land Readjustment Law (1954)	Urban Redevelopment Law (1969)	New Residential Area Development Law (1963)
Target Areas	Applied broadly from urbanized area to new town	Urbanized area	New town
Project Size	Usually more than a few hectares (> 100 hectares)	Several hectares (mainly 1-3 hectares)	More than 100 hectares
Implementing Bodies	Individuals, cooperatives, local governments, public corporations, private sector	Individuals, cooperatives, local governments, public corporations, private sector	Local governments, public corporations
Achievement	395,206 ha	1,193 ha	17,943 ha

Source: "Urban Planning System in Japan" (JICA in cooperation with MLIT, 2007)

See also: Case Study on "Land Readjustment in Japan" (World Bank TDLC, 2016)

² The former includes: land readjustment project, urban redevelopment project, while the latter includes: new residential development project, residential district development project, industrial zone development project, and new urban infrastructure development project.

6. Urban Facilities

都市施設

One of the most fundamental provisions of Japanese City Planning Law is that the location and area of Urban Facilities are stipulated in advance to **1) tightly regulate the building and land development activities of the land plots included in the area of Urban Facilities, so that the construction of such facilities in the future can be;** **2) ensure the consistency across land use, projects and facilities, ensuring the effective consultation with relevant agencies and general public.** The first objective is due to the country's experience during the rapid growth period that urbanization happened very quickly and hence became very costly to secure land in a built-up area for urban facilities.

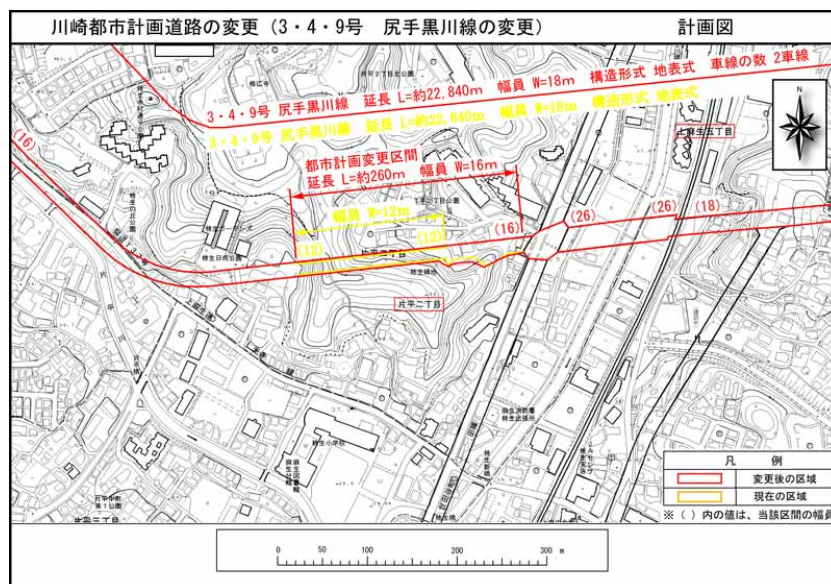
This is done through a “City Planning Decision” otherwise known as TOSHI KEIKAKU KETTEI. Effects include, among others:

- Building activities will be restricted in areas where Urban Facilities have been stipulated;
- Once the location of facilities is determined, landowners/ leaseholders can prepare an appropriate development plan in accordance with the facility plan.

Urban Facilities subject to the above are the following:

- Transport facilities such as roads, urban rail transit systems, car parks, automobile terminals, etc.
- Public space such as parks, open spaces, plazas, etc.
- Utilities such as water, sewerage, electricity/ gas, etc.
- Waterways such as rivers, canals, etc.
- Education and cultural facilities such as schools, libraries, research facilities, etc.
- Medical and social welfare facilities such as hospitals, day care centers, etc.

Figure 4 Urban Road Plan in Kawasaki City, Japan



Source: Kawasaki City, Japan

7. District Planning

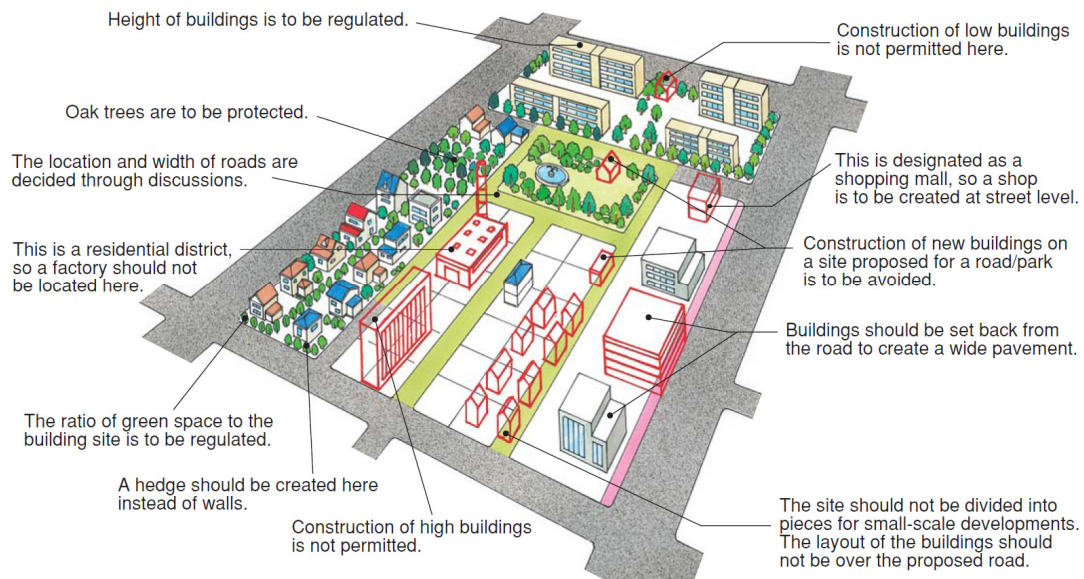
地区計画

District Planning was added as a new instrument in the city planning system in 1980 as a detailed land use planning system applying to areas with several hectares, often with theme-specific development purposes. It is decided by the municipality and **must be drafted through consultation with land owners**. Moreover, additional efforts are often made to consult the residents as well. It is an **overlay regulation** over primary regulations (Urbanization Promotion Area/ Urbanization Control Area, Land Use Zones) to provide more detailed regulation on land use and building activities to cater to the specific needs of the area.

Regulations under the District Plan include the following:

- Location of urban facilities (local roads, small parks, open spaces, footpaths, etc.)
- Building control and regulations (land use, floor-area ratio, building coverage ratio, scale of building lot, set back of building from the boundaries, design, hedge, green space ratio, etc.)
- Preservation of green and open space

Figure 5 Image of District Plan



Source: "Introduction of Urban Land Use Planning in Japan" (MLIT, 2007)

8. Land Development Permission

開発許可

All entities seeking to develop land both inside and outside City Planning Areas (CPAs) are required to obtain land development permission from prefectural governors. There are two criteria for permission. In an Urbanization Promotion Area (UPA), if the development plan satisfies the permission standard (technical), then the project is permitted. However, in the Urbanization Control Area (UCA), the development plan should be consistent with the criteria for the project location in addition to the technical standard (local impact criteria).

Table 3 Scale of Land Development requiring Permission

City Planning Area	Urbanization Promotion Area (UPA)	1,000 m ² or more
	Urbanization Control Area (UCA)	All projects
	Area without Division	3,000 m ² or more
Quasi City Planning Area		3,000 m ² or more
Other Area		10,000 m ² or more

Source: “Urban Planning System in Japan” (JICA in cooperation with MLIT, 2007)

Technical Standards provide for the following:

- Proper location, scale and function of urban facilities such as roads, parks and schools, water, sewer systems, etc. provided;
- Safely designed structures such as foundations and retaining walls; and
- Environmentally sound development.

Land Development Permission in UCA is allowed in principle either when the development is consistent to the District Plans, or when it is required for agriculture, fishery and forestry activities which are industrial activities often conducted in UCAs.

The following table shows the cost sharing between the public and private sectors in UPA and UCA. While the public sector takes on a substantial part of the public facility development in UPA, this is rather limited for UCA where the private sector has a higher burden of public facility development.

Table 4 Principles of Cost Sharing of Public Facility Development

Urbanization Promotion Area (UPA)	
Public Sector	Urban facilities such as arterial roads, sewerage and large-scale parks (approved in the City Planning Law process)
Private Sector	Access roads, drainage systems, small parks designed for residents within the project area
Urbanization Control Area (UCA) and other areas	
Public Sector	Arterial roads
Private Sector	All urban facilities

Source: “Urban Planning System in Japan” (JICA in cooperation with MLIT, 2007)

9. Development Restrictions

都市計画決定および事業認可時にかかる権利制限

The Land Development Permission system (**see p.9**) was the first mechanism that granted city planners legal authority to withhold permission for land development projects. While this applies to all development proposals, there are additional restrictions and permission processes required for areas within Urban Facilities and Urban Development Projects, in order to prevent development activities that may make the future implementation of projects difficult and/or costly. The additional restrictions become effective through 1) City Planning Decision (Toshi Keikaku Kettei) on Urban Facilities and Projects, and 2) Project Approval (Jigyo Ninka)³.

1. Development Restrictions based on City Planning Decision (Toshi Keikaku Kettei)

The legal effects of City Planning Decision are:

- Building activities can be restricted in areas where urban facilities have been decided. However, those that can be easily removed or transferred, such as below, can be constructed under the permission of the prefectural governor (*):
 - The building is no more than 2 stories high without basement.
 - The main structures are simple such as wood, iron frames, concrete blocks, etc.
- The implementing body is empowered to execute projects

Non-legal effects of City Planning Decision include:

- Once the future location of facilities is determined, landowners/ leaseholders can adjust the use of land in accordance with the facility plan

2. Development Restrictions based on Project Approval (Jigyo Ninka)

Project Approval comes after the planning decision has been made, and after this step actual land purchase and construction takes place. Upon Project Approval, the implementing body has the following powers:

- Compulsory Land Expropriation
- In the area of Urban Facility and Development Project that has been given Project Approval, all building and land development activities are prohibited in principle, even if they satisfy conditions of the City Planning Decision stage noted above (see asterisk).

If it is the implementing body of an approved City Planning Project, a private enterprise is also vested to exercise the powers described above.

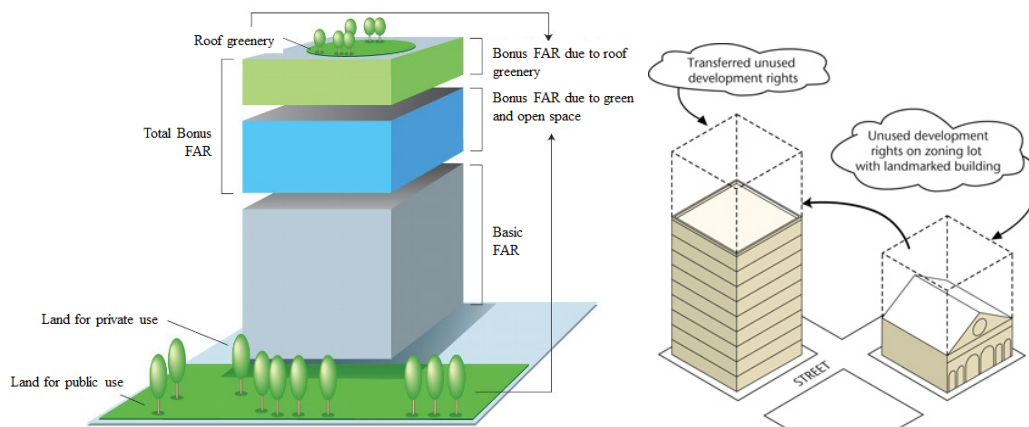
³ Both summarized based on “Urban Planning System in Japan” (JICA in cooperation with MLIT, 2007)

10. Bonus Floor Area Ratios (FARs)

容積率緩和

Floor Area Ratio (FAR) with the combination with Building Coverage Ratio (BCR) help maintain livable environments through height and volume control of buildings. FAR/ BCR also helps estimate the future population and the scale of activities for non-residential areas upon formulating urban development plans, and infrastructure development is planned in line with this estimated population; lack of control of the FAR/ BCR would imply various issues such as deprivation of the right to sunlight, lack of sufficient infrastructure provision and other challenges associated with overconcentration.

However, City Planning Law and other relevant laws have provisions to relax the base FAR (stipulated through Land Use Zones) under certain circumstances. An example is when there is contribution to public plazas and open space, and pedestrian walkways. Moreover, unused FAR (difference of maximum permitted FAR of the area to the building's actual FAR) can be transferred to another building in the vicinity as air rights transfer. However this is possible only in certain District Planning areas.



Source: Modified based on <http://www.dng.co.jp/> and <http://www.phila3-0.org/>

The underlying principle of this deregulation is the optimal distribution of costs and benefits based on local conditions. From the Government's perspective, FAR bonuses are given to realize public goods with no cost for the Government. The "Special District Plan for Redevelopment" for major urban redevelopment projects is a common scheme where bonus FARs are given. Significantly higher FARs allowances than specified in the land use zones are granted as a "bonus" in return for private investment in compensating public facilities. Another common example is how the District Plans in the 1990s used FAR bonuses to ensure the provision of wider roads. More recently, the Government modified the guidelines so that FARs can be relaxed up to 1.5 folds for hotels to address the lack of room supply.

ANNEX: Administrative Units and Hierarchical Demarcation of Roles

日本の行政単位と行政区間の役割分担

Japan consists of 8 regional blocks under the National Government and 47 prefectures, each overseen by an elected governor. Each prefecture is further divided into municipalities (cities, towns and villages).

Table 1 Overview of Inter-Jurisdictional Role-Sharing

Sector	National	Prefectural	Municipal
Spatial plans	<ul style="list-style-type: none"> National Spatial Plans 	<ul style="list-style-type: none"> Regional Spatial Plans Master Plans for City Planning Area 	<ul style="list-style-type: none"> Municipal Master Plans District Plans
Infrastructure development	<u>Transport</u> <ul style="list-style-type: none"> National expressways National roads High-speed railway Hub airports <u>Other key infrastructure</u> <ul style="list-style-type: none"> Energy infrastructure 	<u>Transport</u> <ul style="list-style-type: none"> National roads Prefectural roads Inter-city railway Regional airports Industrial ports <u>Other key infrastructure</u> <ul style="list-style-type: none"> Telecom infrastructure Public housing Parks Cultural facilities 	<u>Transport</u> <ul style="list-style-type: none"> Municipal roads Agricultural roads Fishing ports <u>Other key infrastructure</u> <ul style="list-style-type: none"> Water supply, drainage Solid waste management Public housing Parks Cultural facilities
Land use		<ul style="list-style-type: none"> Area division (UPA/UCA) Land use zones and special districts 	<ul style="list-style-type: none"> Land use zones and special districts
Economy and industry	<ul style="list-style-type: none"> Currency, finance Economic policy Stock exchange 	<ul style="list-style-type: none"> Promotion of primary economic sector Tourism, SME promotion Tourism facilities Landscape preservation 	<ul style="list-style-type: none"> Promotion of primary economic sector Promotion of local commercial facilities Tourism, SME promotion Tourism facilities Landscape preservation
Employment	<ul style="list-style-type: none"> Labor standards Human resource development policies 	<ul style="list-style-type: none"> Human resource development training Job placement 	<ul style="list-style-type: none"> Human resource development training Job placement
Health and welfare	<ul style="list-style-type: none"> Public pension Public insurance Medical care 	<ul style="list-style-type: none"> Regional health services Infections Hospitals 	<ul style="list-style-type: none"> Welfare services Livelihood protection Nurseries Hospitals
Education, culture and science	<ul style="list-style-type: none"> Aerospace development Nuclear power National heritage 	<ul style="list-style-type: none"> University, high school Important heritage 	<ul style="list-style-type: none"> Middle school, elementary school, etc.
Environment	<ul style="list-style-type: none"> National parks Environment assessment 	<ul style="list-style-type: none"> Industrial solid waste management Environmental regulations 	<ul style="list-style-type: none"> Solid waste management Living environments
Safety, security and disaster risk management	<ul style="list-style-type: none"> National security Disaster risk management policies 	<ul style="list-style-type: none"> Police Regional disaster risk management 	<ul style="list-style-type: none"> Fire fighting Local disaster risk management

Source: National Governor's Association (translated and modified from original source)



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Developing the Waterfront District as a High-Amenity Business and Commercial Center

The case of Minato Mirai 21 in Yokohama City

Background and Objectives

Minato Mirai 21 is internationally known as a high-amenity business, residential, and historical waterfront district between Yokohama's major railway terminal and traditional downtown districts. The large site was originally used as part of Yokohama Port's backyard and shipyard for Japan's growing international and domestic trade activities in past decades. However, heavy manufacturing and maritime transport and warehouse activities were diminished by the 1960s. When the Minato Mirai 21 waterfront development plan was proposed, Yokohama faced several urban issues related to rapid population growth, housing shortage, motorization, traffic congestion, and environmental pollution. Its business decline was especially serious for two major reasons. First, Yokohama's city core, which was seriously damaged during WWII, could not anchor major trading and commercial functions, while major business centers in central Tokyo competitively attracted a large number of major corporations and related medium- and small-size firms. Second, the new commercial development around Yokohama Station could not fully utilize its location advantage in the region due in large part to its physical and functional disintegration with the traditional downtown districts. As a consequence of these two shortages, the wider areas of Yokohama were increasingly transforming into large "bed towns" for an increasing number of commuters to Tokyo. In order to reverse this unfavorable suburbanization trend and to reestablish Yokohama's business and cultural identity, the City of Yokohama proposed six major interlocking, strategic projects in 1965. Of them, Yokohama City Center Redevelopment Project aimed to integrate two divided commercial and business areas by redeveloping the former backyard and shipyard sites to accommodate 190,000 employees and 10,000 residents, now known as Minato Mirai 21 (Figure 1).

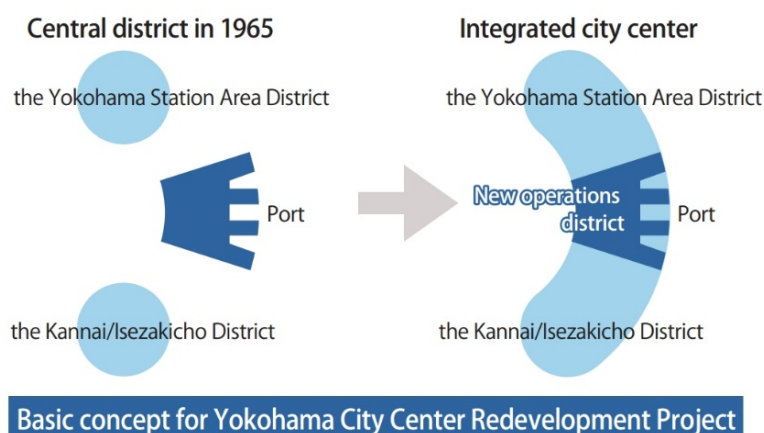


Figure 1: Basic concept for Yokohama City Center Redevelopment Project

Source: City of Yokohama. 2016. Minato Mirai 21 Information, Vol.87.
<http://www.city.yokohama.lg.jp/toshi/mm21/pdf/info087-e.pdf>

Developing the Waterfront District as a High-Amenity Business and Commercial Center

Project Overview

Urban Planning and Development Progress

Minato Mirai 21 is composed of two large districts: “Chuo District” (141ha) for prestigious office use with high-grade infrastructure and urban amenity settings; and “Shinko District” (41ha) for upgraded ferry terminal use with restored historical buildings and spacious waterfront settings. The whole area of Minato Mirai 21 is legally coded for commercial use and the detailed land use plan is further categorized into four types: buildings including commercial and residential use (87ha); road and railways (42ha); park and greenway (46ha); and port facilities (11ha). Of the total 186-ha area, 76-ha land was created by major reclamation projects. The actual project delivery has taken much longer than the original schedule, which was targeted to complete the entire development by the year 2000. Indeed, many sizable lots in Minato Mirai 21 have long been unfilled with private real estates, due to occasional market shocks and sequential economic downturns across Japan and Asia over the last few decades. To utilize the undeveloped land lots, the City of Yokohama as a project owner allows temporal land use for commercial activities with some fixed lease terms up to 10 years. As a result of this interim arrangement, the progress of private building development in Minato Mirai 21 has reached 84.9%, of which permanent use accounts for 85.5% and temporal use records 14.5%, as of 2016.

Infrastructure Development Initiatives

To integrate the two divided districts, the City of Yokohama in 1983 commenced three major development projects: land reclamation (73.9ha); land readjustment (101.8ha); and port facility improvement (77.9ha). Firstly, the land reclamation project was completed by the City of Yokohama in 1998, covering 40% of the

entire district. Next, land readjustment was implemented by the Urban Renaissance Agency and finished in 2011. It should be noted that the land for transportation facilities, open spaces, and urban parks in Minato Mirai 21 was assembled through the land readjustment scheme. Finally, the port facility improvement package, jointly developed by the city and national governments, contains new green spaces, access roads, pedestrian networks, and other social facilities. Furthermore, in view of urban resilience and disaster risk management, the city reinforced the reclaimed land by ground improvement techniques to prevent liquefaction and developed tall revetments and elevating residential lands to protect from hightides and tsunami along the rivers and in Yokohama Port.

High Accessibility and Diverse Transportation Network

The district can be conveniently accessed by a variety of transportation systems. The major model option is Minato Mirai Line opened in 2004 which is directly connected to Shibuya Station in central Tokyo. Two arterials and several link roads enhance transportation connectivity and business cohesiveness across Chuo District, Shinko District, and their neighboring areas extensively. With the high-quality transit infrastructure and services, a range of business persons, residents, and visitors can get smooth access to and from international and domestic hub facilities in Tokyo (e.g., Haneda and Narita Airports). Furthermore, footbridges, automated walkways, and underground paths form an integrated pedestrian network over the entire district, which is accompanied by intercity bus, water bus, and bicycle-sharing schemes.

Area Management

The vision and concepts of Minato Mirai 21 have been embodied through public-private collaboration in accordance with the basic

agreement of 1988 among landowners and other stakeholders around Chuo District. Particularly, the agreement enables the landowners to take a strong initiative in formulating local rules for well-balanced development. Also, the agreement requires the obligation of all office developers to provide a certain amount of public open spaces and social activity floors in their properties. It further stipulates detailed standards and rules on building design, such as minimum site scale, height restriction, pedestrian circulations, and setbacks of exterior walls.

Project Impacts

Economic Impact:

Minato Mirai 21 has successfully attracted international and domestic capital flows as follows: 102,000 workers (in 2015); 1,770 offices (in 2015); and 38 annual International conferences (in 2014). It also contributed to increases in local tax revenues with the amount of JPY 15.8 billion (in Fiscal Year 2014). The City of Yokohama estimates that total private investment in the construction sector is about JPY 2,658.5 billion from 1983 to 2010 and that in the wider business sectors is JPY 1,755.6 billion annually.

Social Impact:

The project produced a plentiful amount of public amenities and multi-purpose facilities for a range of cultural and social activities (e.g., Minato Mirai MICE facilities, exhibition halls, event squares, museums, green spaces). In addition, the common spaces and activity floors required across properties have promoted business and community interactions among workers, residents, and visitors.

Environmental Impact:

With the concept of “FutureCity” initiatives proposed by the Japanese Government, Minato Mirai 21 accommodates a variety of eco-friendly transportation modes (e.g., public

transportation, pedestrian network) and green facilities (e.g., 10 green parks, solar power generators, heat-shielding pavement, greened rooftops/building walls, and open public spaces), which largely contribute to Yokohama’s CO₂ emission reduction.

Lessons Learned

Large-scale waterfront development is internationally favored by policymakers and is commonly applied to recover urban amenities and stimulate local economies in declining city centers. However, in many cases, policymakers cannot successfully deliver all major projects and materialize their ambitious pictures, due to unexpected macroeconomics impacts and drastic market changes in the long term. Key lessons from the case of Minato Mirai 21 are summarized as below:

Public Initiative for Waterfront Development:

Large-scale waterfront development generally calls for a vast amount of upfront investment in public infrastructure (e.g., land reclamation, new road development, subway construction on the soft ground), whereas the degree of private property investment and development depends on dynamic market climates in the long run. Thus, it is essential to establish the long-term stewardship between public and private partners. Especially, the city government as a major landholder needs to flexibly offer favorable lot sale and/or lease conditions and manage debt service payments during interim periods.

Synthesizing New and Old Downtown:

Intra-city transportation connectivity and land use coordination are essential to integrate individual business districts into one competitive economic cluster. To attract international and domestic business travelers, high-quality transit access services to and from airports and high-speed rail stations are vital. The intercity and intracity transit networks



Developing the Waterfront District as a High-Amenity Business and Commercial Center

should be integrated with pedestrian and bicycle circulation systems across private properties and public facilities. The enlarged seamless transportation system should be supported by transit-oriented land use coordination and urban amenity provisions between new and old districts.

Future Challenges

Since the Minato Mirai 21 plan was initially proposed, Yokohama has experienced periodic economic recessions. While the waterfront residential properties easily attract a number of amenity-sensitive households, the city must keep a group of the business districts competitive against central Tokyo and wait for high-profile business entities to move into still-vacant properties and land lots. Greater incentives, better amenities, and longer-term partnerships need to be offered from the local government side to potential business owners.

The Tokyo Development Learning Center (TDLC) program is a partnership of Japan and the World Bank. TDLC supports and facilitates strategic WBG and client country collaboration with select Japanese cities, agencies and partners for joint research, knowledge exchange, capacity building and other activities that develop opportunities to link Japanese and global expertise with specific project-level engagements in developing countries to maximize development impact.

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Owner-driven Urban Revitalization

Tokyo
Development
Learning
Center

The case of Marugamemachi Shopping Street in Takamatsu City

Japan Project Brief

Background and Objectives

Small and medium cities in Japan have experienced urban decline and suburban sprawl over the past few decades. Such cities are at risk of being hollowed-out and cannot sustain their local public services. Small ones may even be in danger of disappearing because of declining population and aging society. Confronting the risk of urban decline, cities have been calling for urban revitalization and ways to shrink suburban areas in a healthy way, with the national and local governments introducing a variety of programs, including provision of subsidies for urban revitalization activities. However, only a limited number of cities attained successful results so far.

The Marugamemachi Shopping Street in Takamatsu City is one of the innovative cases of urban revitalization uniquely initiated and led by land owners. Takamatsu City, the capital city of Kagawa prefecture, evolved as a critical exchange point for people and goods between Shikoku Island and mainland Japan. The district of Marugamemachi, in particular, has been playing a central role in the city's trade and commercial activities since it was established in the late 16th century. Being a part of the country's longest shopping street with a length of 2.7 km, the district in the central business area of the city had high residential density and a concentration of various urban facilities, such as prefectural and municipal offices, schools, hospitals, and commercial buildings. However, both the district and city started suffering from rapid urban decline in the 1990s following the construction of Seto Ohashi Bridge in 1988. By connecting the mainland and Shikoku Island, this gigantic bridge opened up the island's consumer market to large companies from the mainland. Local consumption largely shifted from the traditional retail streets to the large stores and suburban shopping malls established by major retailing companies. As a result, land values in the central district dropped significantly and the city government lost a large amount of income from property taxes. To stop this rapid urban decay, Marugamemachi's land owners initiated a revitalization project of the shopping street in a rather unconventional way.

Project Overview

The basic redevelopment plan of Marugamemachi was first proposed in 1990. The target street with a total length of 420m was divided into seven zones Zones A-G and then was redeveloped in a phase-by-phase manner. Each zone accommodates a variety of facilities and services with a unique concept, such as exclusive shopping; art and culture; beauty, health and fashion; local consumption promotion; and family and casual (Figure 1).

The main gate and the large public plaza with a symbolic dome were built around Zone A in 2006, followed by the successive redevelopment of Zone B and C in 2009, and G in 2012. By turning the street into a huge shopping mall with a variety of functions, the project makes the street more attractive for customers. In addition to commercial facilities, high-density housing and other social facilities, such as hospitals, public spaces, and offices

Owner-driven Urban Revitalization

were developed to attract people back into the city center. Despite land ownership being limited by fixed term land leaseholds, the multistory apartments developed along the street or in the upper stories of the commercial buildings on the street were sold out immediately. Major types of households in these apartments are retired elderly couples

and “dual income and no kids” couples, who are mainly looking for somewhere accessible and convenient to live in the central district. So as well as revitalizing commercial activities, the Marugamemachi redevelopment project intended to increase of population of the district.



Figure 1: Map of planned buildings along the Marugamemachi shopping street

Source: Takamatsu Marugamecho Shotengai Shinko Kumiai. Takamatsu Marugamemachi town development strategy (in Japanese). http://www.japanpa.jp/prize_epa/assets/15thyusyuu_keikaku_takamatsu.pdf

Separating Land Use Rights from Land Ownerships

Acquisition of land or land readjustment is often a challenge for redevelopment in general. In the case of Marugamemachi, land owners along the street decided to give up their family businesses or relocate establishments, and then they leased their land lots to a community development company which they established in 1998 to manage the redevelopment project. Under the common objective to re-attract residents and visitors and revitalize business in the old retail street, they agreed to separate

the land use rights from property rights. The community development company rented out the land lots for 60 years through the investment companies also developed by the land owners, while the owners relinquished the rights to use their land lots. Through this ownership arrangement, fragmented land lots with different owners were efficiently consolidated into a large parcel for redevelopment. Then, the company selectively invited new competitive tenants in consideration of a well-balanced mix of business types according to the basic concept of the revitalization plan to make the place more attractive for customers.

Financing the Redevelopment Project by Securitizing the Land Use Rights

Separation of land ownership and land use rights also helped to save the cost of redevelopment. The land owners established an investment company for each zone and invested the land use rights to the company. The investment company then consigns the management to the community development company with a fix-term contract (Figure 2). This lease scheme saved the cost of acquisition of land for redevelopment. For example, the total development cost of Zone A was JPY 6.9 billion, which was about a half of the cost generally required to build such property at that time. The 21 land owners also took a project risk personally by borrowing money from banks to directly invest JPY 260 million in total on the project. In turn, the land owners received the profits generated by operating new commercial facilities as dividend. Although the amount of the dividend changes depending on the sales of commercial facilities, the land owners have received a 8-12% dividend so far. Several government subsidy schemes were also utilized for the redevelopment project to reduce the amount of borrowing from banks, which resulted in a reduced financial burden for the land owners.

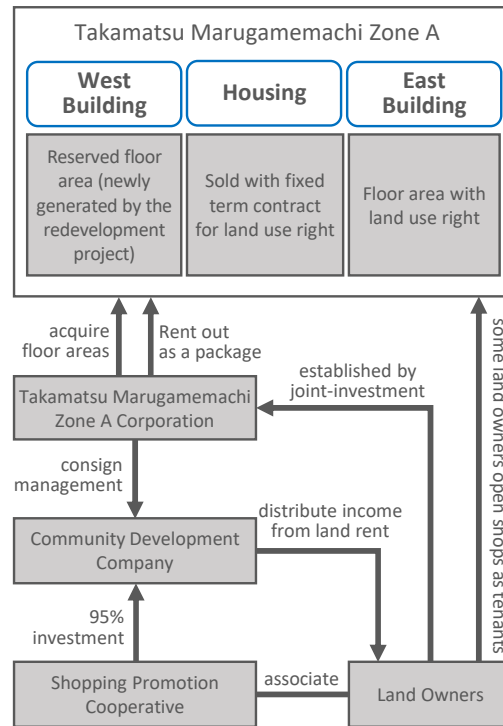


Figure 2: Development mechanism of Zone A
 Source: Produced by author based on document from Japan foundation for regional vitalization (in Japanese).
<https://www.furusato-zaidan.or.jp/machinaka/project/casestudies/kagawa01.html#1>

of Takamatsu (local government). This means that the involvement of local government is very limited in the management of the company.

Roles of the Community Development Company

The community development company specializes in managing a range of properties and services (e.g., commercial buildings, housing, tenants, car parking, and community bus operation). All staff are business professionals who have rich knowledge and experience in managing commercial buildings. This is in contrast to community development companies that in general often hire city officers or private executives to promote and coordinate redevelopment projects. Financially, 95% of the investment to the company comes from the private sector (93% from the association for shopping district promotion, 2% from the company invested by land owners) and the rest comes from the City

Project Impacts

Economic Impact:

Since the first redevelopment in Zone A was completed in 2006, the vacancy rate of tenant spaces in Marugamemachi has been much lower than those in other comparable districts (Figure 3). Through residents developed under the project, population in the district has increased and promotes business opportunities. The regeneration of Marugamemachi also increased the land value of the district, resulting in increased revenue for the government from property, income, and consumption taxes.

Owner-driven Urban Revitalization

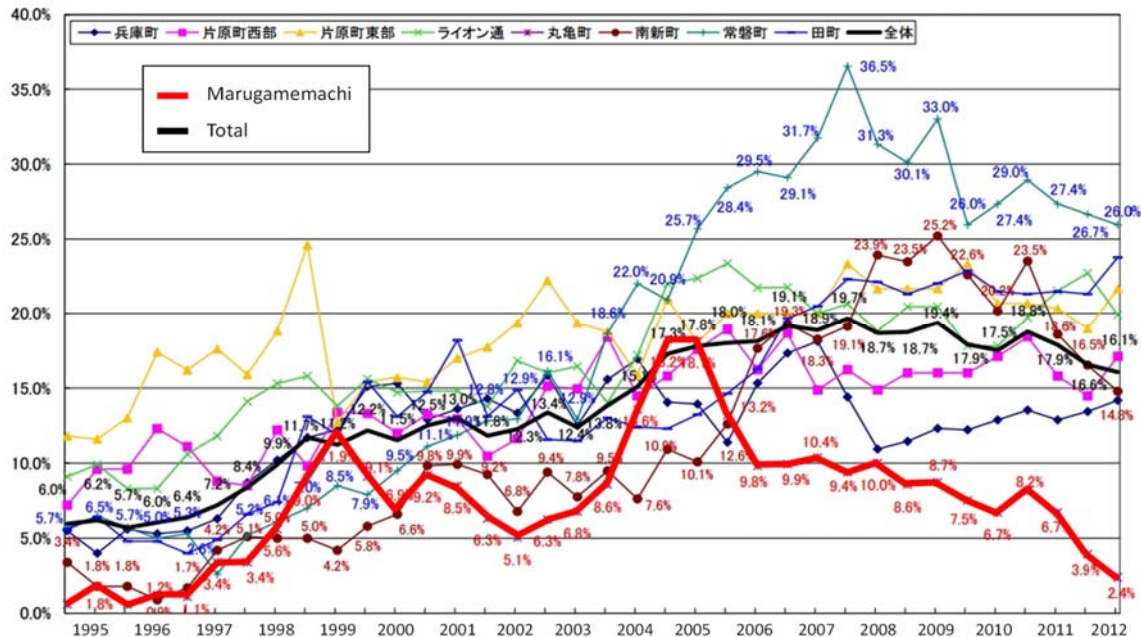


Figure 3: Change of vacancy ratio by shopping street (total floor area)

Source: City of Takamatsu. Result of store location

Social Impact:

In an aging society, there is an increased demand for urban housing units with convenient access to various private and public services within a walkable distance. By redeveloping the old retail street, Marugamemachi meets such unconventional needs for an active aging population. It also brings back young households to the central district by creating an attractive living environment.

Environmental Impact:

The redeveloped district produced human-scale built environments that encourage car-free lifestyles. For example, the main street was pedestrianized and covered with a glass ceiling, various commercial and public facilities were located within a walkable distance, and high-rise residences were developed without car parking spaces, all of which contribute to reducing private car usage and greenhouse gas emissions.

Lessons Learned

Many rural towns and land owners in old commercial districts are seeking innovative ways to revitalize local economies. However, it is not easy for individual land owners to build consensus among all the stakeholders in the neighborhood and it can be difficult to find funding sources for redevelopment projects. Key lessons from the redevelopment of Marugamemachi Shopping Street are summarized as below:

Strong Local Private Initiatives to Revitalize an Urban District:

Historically, retailers along old shopping streets are both individual land owners and local business operators. Although a large-scale redevelopment project has a great potential to generate huge benefits to all the stakeholders, these land owners are often less cooperative with each other for protecting their own property rights. In the case of Marugamemachi, this issue was solved by land owners' decision to lease their land use rights

for the redevelopment project while retaining their property rights, with the strong initiative of local land owners themselves. It is essential to strongly motivate all owners to redevelop by clarifying both potential project risks and investment returns and tightly unite them by sharing vision and goals of redevelopment. The strong will of local communities for redevelopment and the involvement of experts to support the redevelopment are also key factors for success.

Governmental Support with Less Intervention:

Government financial support is also important to implement capital-intensive redevelopment projects to reduce the financial burden and lower the risks for the group of small land owners leading the projects. For the government sector, increased tax revenue is expected from the success of the redevelopment project. However, governments should not always be involved in the decision-making process of private-based projects. Less government involvement encourages land owners to take initiatives, make immediate decisions, and expedite revitalization at their own expense.

Future challenges

In an aging and shrinking society, large-scale redevelopment is a tough challenge with a high risk of failure. With a decreasing population, old shopping districts cannot re-attract the same number of people that they used to in the past period of urban growth. Under such circumstances, redevelopment projects often

become unprofitable and hardly increase land values. Elderly land owners are not willing to participate in progressive investment projects, but rather prefer to maintain their own small businesses. In such a case, strong incentives for the redevelopment and mechanisms to promote trusts in the project are essential to drive individual owners to take certain risks and make every effort so that the project is a success. Furthermore, as redevelopment projects require long-term involvement across generations, the merits of redevelopment should be valuable to successive land owners who would take over the projects in the future.

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Promoting Grade-A Office Districts with an Upgraded Railway Hub for Global Business Competitiveness

Tokyo
Development
Learning
Center

The case of Otemachi-Marunouchi-Yurakucho (OMY) around Tokyo

Japan Project Brief

Background and Objectives

The districts of Otemachi-Marunouchi-Yurakucho (OMY) are progressively forming into the global business, financial and economic center of the nation. The area is located between the Imperial Palace and Tokyo Station – the oldest and largest railway hub in Japan, similar to Grand Central Station in New York and King’s Cross Square Station in London. The 120 hectares of prestigious office area accommodates about 230,000 business workers in a number of high-rise buildings, of which 30 properties are owned and managed by Mitsubishi Estate – one of the top real estate companies in Japan. The vast land of Marunouchi next to Tokyo Station was originally transferred from the Army to Mitsubishi in 1890 and subsequently transformed into the nation’s primary business center with a classic redbrick design, called “New York Block”, during the period of industrialization (1890’s – 1930’s) and later became the location of some of the capital’s modern skyscrapers in the period of rapid economic growth (1950’s -1970’s).

However, the OMY area once lost its competitive position with the emergence of domestic and international competitors, especially after the crash of Japan’s asset bubble economy around 1991. The new sub-centers of Shinjuku, Shibuya, and Ikebukuro with updated office estates provided by Mitsubishi’s rival developers largely relocated a number of business tenants and related producer services from the outdated buildings in Marunouchi. More critically, the main offices of the Tokyo Metropolitan Government and other important public corporations were moved out around 1991. Furthermore, multinational corporations gradually moved their headquarter functions from Tokyo to emerging international business hubs in Asia, such as Hong Kong, Singapore, and Shanghai.

In order to regain a competitive position for Japan’s major cities and traditional business districts in both the domestic and international markets, the national government has shifted its development strategy from polycentric decentralization to urban regeneration. It should be noted that this shift was initiated by the cabinet in response to rapid changes in social conditions, such as globalization, information society, declining birthrate, and aging population. In particular, the Urban Renaissance Special Measure Law of 2002 relaxes land use regulations and offers generous conditions for private landlords and developers to propose urban redevelopment plans more flexibly and actively in designated business districts. When the proposed plan meets public benefits, its private stakeholders can enjoy a variety of incentives such as tax reductions, low interest rates, and floor area ratio (FAR) exemptions for more efficient and profitable redevelopment practices. On the basis of this special measure law, the OMY districts were designated as one of the Special Urban Renaissance Urgent Development Areas wherein extra fiscal advantages can be rewarded for further private capital investments in addition to the above incentives.

Promoting Grade-A Office Districts with an Upgraded Railway Hub for Global Business Competitiveness

Project Overview

Among many projects delivered in the OMY districts around Tokyo Station, the practices of “Preservation of Tokyo Station financed by FAR transfer”, “Chain Urban Renaissance”, and “Area Management by Public-Private Partnership” are of particular importance for public-private stakeholders to produce globally competitive business clusters in sustainable ways:

Preservation of Tokyo Station Financed by FAR transfer

Accompanied by private redevelopment projects, the national government decided to restore the old redbrick building of Tokyo Station, initially built in 1912 and damaged by firebombing during World War II. While the symbolic building restoration was expected to have broader social and cultural benefits for the neighboring business districts, its project cost was estimated around JPY50 billion. In order to meet both social and commercial objectives, the site of Tokyo Station was extensively designated as a zone for the special FAR exemption and allowed to transfer the unused FARs from the historic redbrick building to the neighboring lots for new commercial tower developments. The station building restoration, partially financed by the FAR transfer revenues, was successfully completed in 2013 by East Japan Railway Company (JR East, the former national railways corporation privatized in 1986), which also developed two 205-meter tall skyscrapers among the towers with extra FARs, and reinvested the increase in land value of the densified grade-A office¹ buildings to cover the railway finance. To improve the district further, the current provision of a multimodal transportation square for regular bus and taxi services plans is to be completed by JR East in partnership with the Tokyo Metropolitan Government in 2017.

Sequential Redevelopment of the Marunouchi Area

Mitsubishi Estate plays a chief role in implementing a series of redevelopment projects over the office districts of Marunouchi with the application of “Chain Urban Renaissance.” Chain Urban Renaissance is a unique method of redeveloping large office districts sequentially over the long term. First, the developer acquires a vacant plot of land and builds a high-rise tower for tenants and property owners of the old buildings. Next, the old building is rebuilt and tenants and landholders of the next redevelopment area are relocated again to the new building. By repeating this process, the developer can continuously handle a chain of urban redevelopment projects without losing good business tenants from their business territories. Furthermore, in response to drastic changes in Japan’s business climate, Mitsubishi updated the “Marunouchi Restructuring Plan” in 2002 to form an internationally competitive “fast-rate” office district for the long term. As part of this redevelopment strategy, six high-rise office towers were completed until 2007 and currently six more towers are scheduled to be completed by 2017.



Figure 1: Image of Tokyo Station and completed multimodal transit terminal

Source: East Japan Railway Company Home Page. Projects in progress. <https://www.jreast.co.jp/construction/station/>

Area Management in collaboration of public and private

The long-term plan of OMY is embodied not merely by one private developer but jointly initiated by a group of public-private stakeholders across the local business districts.

Indeed, the Council for Area Development and Management of OMY, being comprised of 68 landowners, 12 observers, and 8 special members in 2016, established the Advisory Committee on OMY Area Development in 1996 together with the Tokyo Metropolitan Government, Chiyoda Ward, and East Japan Railway Company. As the first area management initiative in the country, the Committee regularly updates the guidelines for redevelopment activities since 1998. These guidelines set out 8 development goals, key functions of zones, axes, and hubs, district design standards, and local operation rules for coordinating cityscape, networking public open spaces, and transferring FARs. Furthermore, the committee has introduced a variety of area management and place-making initiatives as follows:

- Free loop bus service, called Marunouchi Shuttle Bus, is provided by local business owners within the OMY area;
- Narrow streets were converted into car-free public spaces for a wide range of economic and social activities, such as recreations, events, and open cafes;
- A district-level association was established to assist local commuters in the case of natural disasters. Nineteen building owners agreed to take in stranded commuters from outside the district if they were unable to use public transportation due to natural disasters; and
- Various city events (e.g., festivals, sport competitions, morning university lectures) regularly took place.

Project Impacts

Economic Impact:

The creation of a high-quality business environment in the OMY area has increased labor productivity in the knowledge-based sector, increased demand for grade-A office spaces, and, in turn, land values have risen significantly. Accompanied by the resurgence of knowledge-based business clusters, Marunouchi's high-end retail streets are likely to see an upturn in recent sales figures;

Social Impact:

The OMY area was previously called “weekdays & daytime city” due to the high percentage of office use. However, it is now an area that attracts people and encourages pedestrian flows over the weekends, thanks to a variety of area management initiatives and local place-making efforts. In fact, the number of weekend visitors largely increased after the completion of major redevelopment projects and the number of pedestrians walking through the area grew 2.8 times from 2002 to 2015². The number of shuttle bus users was also recorded as growing more than three times from 2003 to 2014. The redbrick building revived by the application of FAR transfers successfully balanced the cultural and commercial values of Tokyo Station and surrounding office towers.

Environmental Impact:

Urban greenery is carefully incorporated to cover about 16,000 m² of rooftops and building walls. Also, the area management initiatives, such as running shuttle buses and utilizing on-street open spaces, are likely to contribute to reducing GHG emissions by encouraging the use of public transportation systems and non-motorized travel across the business districts.

Lessons Learned

The provision of high-amenity office districts around transportation hubs appears to be a common economic development strategy across global business centers, such as New York, London, Hong Kong, Singapore, and Shanghai nowadays. However, those regeneration practices are often debatable due in large part to unintended social consequences, such as urban gentrification and spatial segregation (Sassen, 2001³, Fainstein, 2010⁴). Indeed, it is critical to promote grade-A office districts for global competitiveness with public-private entities in a sustainable manner. Key lessons from the case of OMY around Tokyo Station are summarized as below:



Promoting Grade-A Office Districts with an Upgraded Railway Hub for Global Business Competitiveness

Market Incentives for social capital improvements:

Private redevelopment projects could meet both commercial and social objectives if market incentives are properly given for public capital improvements. In particular, the exemption and transfers of extra FARs should be designed not merely to increase short-term business profitability but rather to raise public funds for life-cycle asset management.

Long-term commitments and partnerships:

Large-scale redevelopment projects generally require the complex and painstaking coordination of property rights among various stakeholders. The long-term commitment of major developers and the establishment of horizontal partnerships are essential for intergeneration redevelopments and sustainable area management. Many details of urban design, operation, and place-making efforts must be initiated and guided in local specific ways.

Future Challenges

Large-scale regeneration projects by and large have redistributive effects on business activities around the railway hubs and/or across the office districts designated. Such adverse impacts need to be incrementally softened through inclusive land use rezoning and extensive regeneration programs.

- ¹ Grade-A office is generally defined as office buildings with the total floor area of more than 30,000 square meters, built within the past 15 years, located in the top five central business wards in Tokyo (i.e., Chiyoda, Chuo, Minato, Shinjuku, and Shibuya). Source: Y. Nakayama, T. Yamagata. 2015. Research on Classification of Office Buildings. ARES Journal of real estate securitization, Vol. 27. http://www.ares.or.jp/publication/pdf/ares_j27.pdf.
- ² Otemachi Marunouchi Yurakucho OMY District Area Management Report Editorial Committee. January 2016. Area Management Report 2016.
- ³ Sassen, S. 2001. The global city: New York, London, Tokyo. Princeton University Press.
- ⁴ Fainstein, S. S. 2010. The just city. Cornell University Press.

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CASE STUDY LAND READJUSTMENT IN JAPAN



Source: City of Yokohama.



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INTRODUCTION

HISTORY

The origin of Land Readjustment (LR) in Japan dates back more than 100 years. The modern land management system and Agricultural Land Consolidation (ALC) were established in the late 19th century. ALC was an agricultural land development tool to reorganize agricultural lands and develop passage and irrigation channels to improve agricultural productivity. In the early 20th century, ALC was applied to residential area developments in large cities facing rapid population growth. Because ALC required land owners to pay cash for construction, it was difficult to involve poor land owners in the target area. To recover part of the project cost, “surplus lands”—which can be created from private lands under the provision of ALC law—were sold on the market. The idea of surplus lands gave way to the “reserve lands” of the LR Law, which was established in 1954.

The Urban Planning Law established in 1919 was incorporated with provisions of LR, establishing the legal basis of LR. Provisions of the ALC Law were applied as the implementing procedures of LR.

During the period of the 1920s to 1950s, LR—implemented mostly by the central and local government¹—was applied to several objectives such as post-earthquake reconstruction in the Tokyo region, urban renovation in large cities, industrial city construction nationwide, and post-war reconstruction after World War II. Through those experiences, LR techniques were improved and refined. Also, the Agrarian Reform of 1947 to 1950 had increased the

number of landowners, which increased the necessity of LR.

In 1949, the ALC Law was repealed and the Land Improvement Law, focused on agricultural land development, was established. This resulted in the conflicting situation that LR followed the repealed ALC Law, even though the Land Improvement Law also covered LR. To resolve the situation, the LR Law was established in 1954. It aimed to foster completion of the post-war LR projects as well as implementation of large-scale LR projects for new town development in response to socio-economic recovery and increased housing demand.

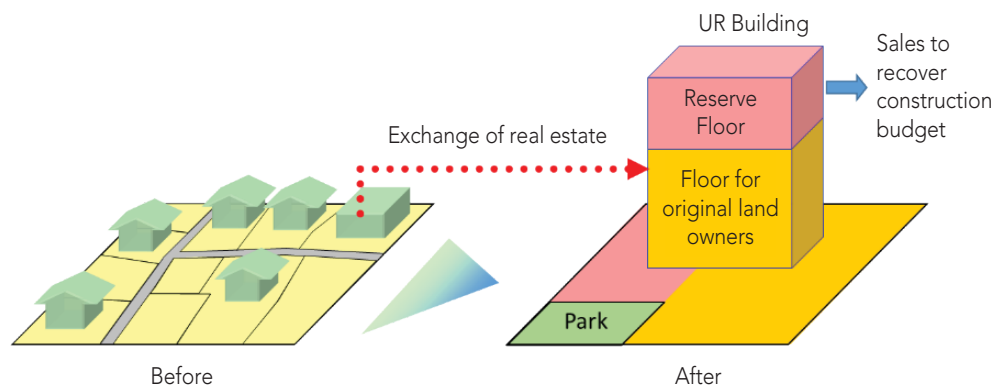
In the period including rapid economic growth during the 1950s to 1990s, large-scale LR projects had been implemented in the major metropolitan areas. Through the experiences of a large number of LR projects, the LR system improved in terms of the approval process, land replotting techniques, and financing; this contributed to quicker and smoother implementation.

After the collapse of the bubble economy in the early 1990s, decreased housing demand contributed to financial issues in private LR projects that depended on sales of reserve lands. At the same time, the

¹ There were also cases of LR projects by cooperatives. However, it seems that under the ALC Law, it was popular to undertake land consolidation projects for projects in peri-urban areas even after establishment of LR by the Urban Planning (UP) Law, due to the availability of financial support from government for land consolidation.

2 Case Study: Land Readjustment in Japan

Figure 1.1: Conceptual Model of UR



Source: Author.

government changed its policy to promote LR for urban renovation in city centers, areas around transit stations, and other urban areas.

Although the number of on-going LR projects has decreased nowadays,² LR has been playing very important role in urban development in Japan through supporting various development purposes. The detailed history of LR in Japan is shown in Annex 1.

KEY ACHIEVEMENTS

LR is one of the popular urban development methods in Japan. It has been used for various development purposes around the whole country. The development purposes include not only residential area development in peri-urban areas, but also urban renewal in urbanized areas, and post-disaster reconstruction and integrated urban development with urban transport facilities. To date, LR has created and redeveloped urban areas with a total area of approximately 3,700 km², occupying 30 percent of the total urban area in the whole country.

Furthermore, LR has developed urban public facilities such as roads, green parks, and station plazas, with achievements including the following:

- city planning roads with a total length of approximately 11,500km (accounting for one-quarter of the total length of all city roads designated on urban plans);
- green parks with a total area of 150 km² (comprising one half of the total area of community parks, neighborhood parks and district parks across the entire country); and
- station plazas with a total number of 950 facilities (one third of station plazas at stations with more than 3,000 passengers per day).

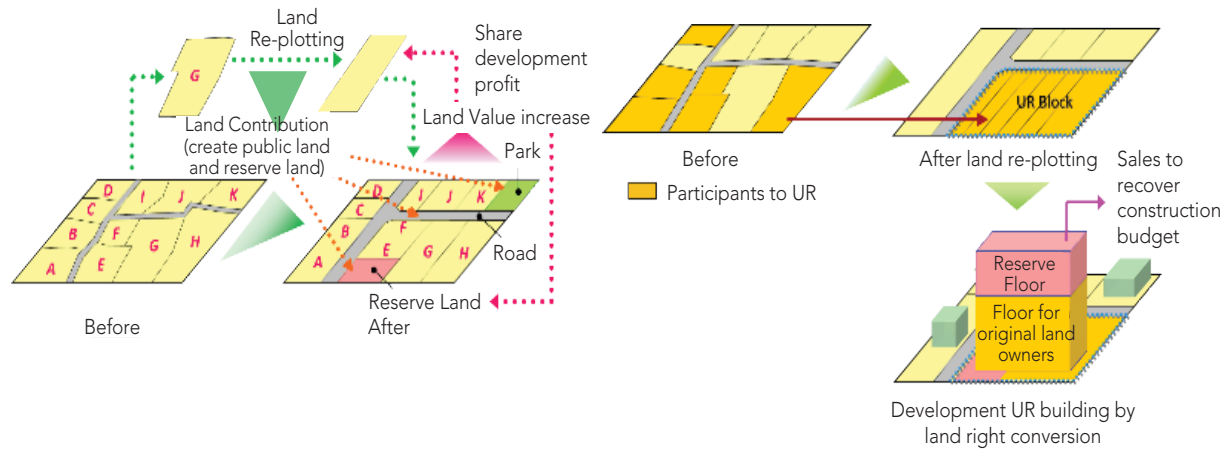
OTHER RELATED URBAN DEVELOPMENT TOOLS: URBAN REDEVELOPMENT (UR)

In this paper, a broad definition of LR is taken. In this context, urban redevelopment (UR) is considered to be an application of LR. UR in Japan³ converts land rights in a project site to a part of building rights by using land right conversion. For approval of the project and to apply for the national subsidy, the project area must be designated⁴ as an urban

² Currently there are about 900 projects covering a total area of 363km².

³ The Urban Redevelopment Law in Japan was established in 1969. UR aims to promote high-intensity land use under the UR Law.

⁴ In the urban planning context, "designation" means decision and public notification by local government.

Figure 1.2: Conceptual Model of LR and Integration with UR


Source: Author.

redevelopment promotion area in urban planning or must satisfy several other conditions such as: designation as a high-intensity land use area, vulnerability to fire hazards, and improving the efficiency of land use. These conditions focus utilization of UR on urban redevelopment in urbanized areas—distinguishing the UR objectives from those of LR. The conceptual model of UR is illustrated in Figure 1.1.

In the case of LR projects for city center redevelopment and station area reconstruction, integrating

LR with UR can be applied for the purpose of building development for high-intensity land use. Land rights which participate to UR are replotted into specialized urban redevelopment blocks within the LR project site. After replotting, the land rights are converted to UR building rights and a share of the joint ownership of the plot of the UR building.

The conceptual models of LR as well as integrating LR with UR are illustrated in Figure 1.2.

LEGAL AND INSTITUTIONAL FRAMEWORK

OVERALL LEGAL FRAMEWORK

LR in Japan is an urban development tool with legal basis in the LR Law.⁵ The legal framework for LR consists of the LR Law, other related laws such as the Urban Planning Law and the Urban Redevelopment Law, and the related regulations and guidelines. Figure 2.1 illustrates the overall legal framework of LR and UR in Japan.

The LR Law is a procedural law mainly stipulating the rights and obligations of LR implementers and stakeholders in the approval and implementation processes. Annex 2 shows the approval process for two categories of implementers: (a) LR cooperatives and (b) local governments. Other related laws function as the legal basis for specific activities in the

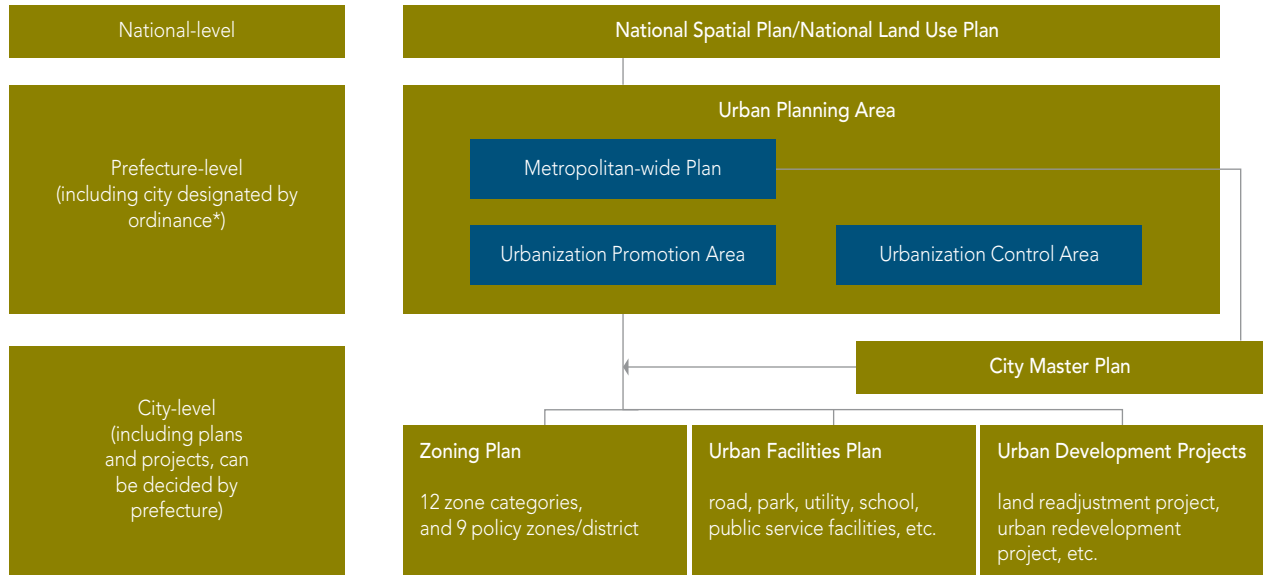
⁵ Law No.119 of 1954.

Figure 2.1: Legal Framework of LR and UR in Japan



Source: Author.

Figure 2.2: Urban Planning System in Japan



Source: Author.

*City designated by ordinance: Large city, with population of 500,000 or more, which is designated by ordinance under the Local Autonomy Law.

approval and implementation procedure, such as: coordination with the urban planning process (and related activities), compensation, and real estate registration.

In the case of LR projects integrated with UR, the UR Law functions as the legal basis for the urban development project in the designated block within the LR project area.

URBAN PLANNING SYSTEM

The urban planning system in Japan (illustrated in Figure 2.2) consists of three levels: (a) national level, (b) prefecture level, and (c) city level. The prefecture- and city-level urban planning play a main role in urban management.

The urban planning area designated by the prefecture government is divided into two zones: (a) urbanization promotion area and (b) urbanization control area, based on development policy in the prefecture-wide plan. The urbanization *promotion* area

aims to strategically promote urbanization as a priority. It covers existing urbanized areas and future urban areas to be urbanized within about 10 years. On the other hand, in the urbanization *control* area, development and building activities are basically prohibited based on the policy to preserve agricultural areas and natural resources.

City master plans are intended to decide the fundamental policy for urban development of the city area. They usually provide vision, development goals, urban structure, a conceptual land use plan, and development policies of each sector (e.g., transportation, center area, housing, city scape control, and disaster management). Remarkably, city master plans in Japan do not show detailed land use plans. Zoning plans, urban public facilities plans, and urban development projects designated in the urban planning process are based on the city master plan, control building and development activities.

The zoning plan in Japan (see Figure 2.3 for an example) consists of 12 zone categories, and nine policy zones and districts. The zoning plan divides

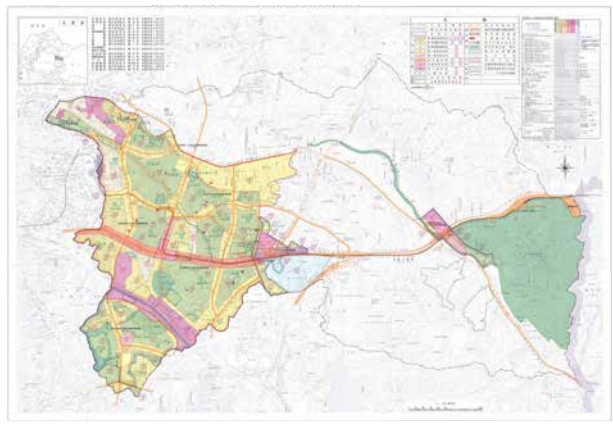
the urbanization promotion area into the zone categories such as low-rise residential zone, middle and high-rise residential zone, commercial zone and industrial zone. These zones are provided with control items regulating building use, building coverage ratio (BCR), floor area ratio (FAR), building height and other aspects related to building profile.

Urban planning is institutionally the upper-level plan of LR. LR must follow what the urban planning map shows, including the zoning. Regarding alteration of zoning plans in the LR project site, local government revises the zone category, BCR and FAR, *etc.* to meet the land use plan of the LR project through discussion with the LR implementer and land right holders. In cases where more details or relaxation of building controls are required for township management (e.g., historical cityscapes, unified streetscapes, and high-rise development) at the district level, municipalities lay down a District Plan. The Plan shows not only the future vision of the district but also provides the regulations relating to detailed matters, such as site, use, construction and building. The Plan also shows individual features that reflect the views of the local community.

Under the Urban Planning Law, each “urban facility” is to be designated with its location and boundary on the urban plan. Urban facilities are categorized into 12 types: (a) transportation facility, including road; (b) public open space; (c) utility and its plant; (d) river and canal; (e) educational and cultural facility; (f) medical and social service facility; (g) other medical and social service facility; (h) market, slaughterhouse and crematory; (i) collective housing facility; (j) collective government and public office facilities; (k) distribution business park; and (l) other facility, such as disaster prevention and mitigation facility.

According to the LR Law, the LR Implementation Plan must follow designated urban facilities. Roads and green parks are typical urban facilities included in LR project. Lands for urban facilities in LR projects are secured by land contribution from the land

Figure 2.3: Zoning Plan in Nagakute City



Source: Nagakute City, Japan.

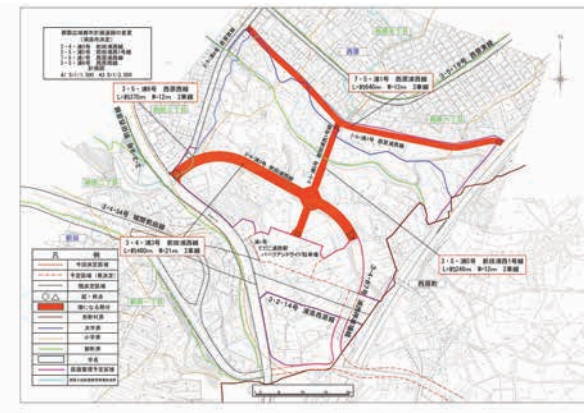
right holders within the site. In addition, the LR project can apply for national subsidy equivalent with compensation cost for the lands and buildings in a hypothetical case where land acquisition is made.

The procedure for the designation or alteration can be executed for each facility as necessary. Each facility’s basic parameters, such as size and boundary, are decided through discussions at public meetings and through the Urban Planning Advisory Committee in the city or prefecture government. This flexibility is useful for rapid urban development as well as LR project implementation. An example of the designation map for a road as an urban facility is shown in the Figure 2.4.

In the Urban Planning Law, LR and UR are defined as urban development projects to be designated on the urban plan. In the designation process, the necessity, function and scale are decided through discussions at public meetings and through the Urban Planning Advisory Committee in the city or prefecture government. In addition, the project must be located within the Urbanization Promotion Area.⁶

⁶ There are many cases where Urban Planning Areas are not divided into Urbanization Promotion Areas and Urbanization Control Areas. In such cases, LR can be implemented if the project area is not located within an Urbanization Promotion Area.

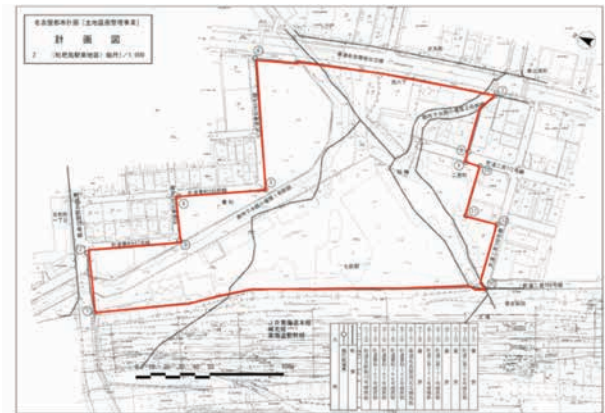
Figure 2.4: Official Map for Designation of Urban Facility (Road)



■ Designated City Planning

Source: Urasoe City, Japan.

Figure 2.5: Official Map for Designation of LR Project



Source: Kiyosu City, Japan.

If a development through LR is planned within an Urbanization Control Area, the following procedures are required: (a) the Urban Planning Area Master Plan and City Master Plan must include the development; (b) the Urban Promotion Area needs to be expanded to include the proposed LR site; and (c) The LR project needs to be designated—and (b) and (c) must take place simultaneously.

The urban planning designation map must provide clarity about the project location and boundary, so that landowners can judge if their land is included in the area of the LR/UR project(s). After the public announcement of the designation, building

activities are restricted in the designated area under the Urban Planning Law.⁷ This restriction system aims to facilitate implementation with respect to the negotiation with the land right holders and reduction of the compensation. Meanwhile, land right transaction is not prohibited; land rights can be sold and bought after the designation. Figure 2.5 provides an example of a designation map for an LR project.

⁷ Both the Urban Planning Law and the LR Law stipulate building restrictions. The Urban Planning law enforces restrictions until the implementation plan for the LR project is approved.

OBJECTIVES AND CHARACTERISTIC OF JAPANESE LR

OBJECTIVES AND SCOPE

LR in Japan is an urban development method; its fundamental objectives are as follows: (a) development and improvement of public facilities and (b) enhancement of land usability. Based on these, the LR scopes and functions have flexibility to enable applicability to multiple development objectives according to changing social-economic situations and urban management policy. LR addresses a range of scopes and functions, such as:

- land replotting to reorganize and reshape land plots;
- land contribution to create public spaces and reserve lands to recover development cost;
- development of public facilities; and
- promotion of public and private participation.

Most LR projects in Japan do not include new building development in their scope. New buildings are developed by land right holders and the purchaser of reserve land. However, there are some cases where the development objective of LR projects include building development (e.g., high-rise building development in underutilized areas and social housing development in large-scale new town development).

As previously described, high-rise buildings can be developed by integrated use of collective land

replotting and urban redevelopment, converting the replotted lands to building rights under the UR Law, or cooperative rebuilding without special legal basis.

Regarding social housing development, the Japan Housing Corporation (JHC)⁸ has played a major role since the 1950s. JHC was established in 1955 in order to implement new town developments and to develop, sell and rent social housing. JHC purchased private lands and state lands in the LR project area before LR implementation. After LR, JHC constructed social housing on the replotted lands that were gathered into the site for the social housing development. Through this method, JHC was the implementer as well as a land right holder in the LR project. The social housing was constructed out of the scope of the LR project.

CHARACTERISTICS

Japanese LR has contributed to better-managed urbanization achieving various objectives across the whole country. The projects are controlled and promoted through the urban planning system and various subsidies under the governmental urban management policy. Characteristics of Japanese LR are summarized as follows:

⁸ Now it's called Urban Renaissance Agency (URA).

Coordination with urban planning. As previously described, LR projects implemented by public implementers, or subsidized by central government, are required to be designated within the urbanization promotion area on urban plans in the preparation phase of the LR project. This coordination system ensures that LR projects generate positive social and economic impacts under the urban planning policy of the local governments. LR has also been an implementation tool to realize the polycentric spatial development patterns of large cities through construction of urban facilities such as city centers, new town areas, and transit corridors in coordination with urban planning.

Various LR implementers. The LR Law provides for three categories of public implementers: (a) local governments (prefecture and city), (b) central government, and (c) government corporations; as well as three kinds of private implementers: (a) individuals (i.e., a land owner or land owners group with several persons or entities), (b) LR cooperatives,⁹ and (c) LR corporations.¹⁰ In addition, the outsourcing agent for LR cooperatives is stipulated in the Law. This is one of the methods for private developers to participate in LR projects. Private developers, as the outsourcing agent, invest in the LR project and receive the reserve lands stipulated under the contract with the LR cooperative as return on their investment. After LR, the private developer carries out real estate development using the reserve lands.

Notable differences between public and private implementers include that public implementers are limited to implementing LR projects designated in urban planning. In other words, LR projects of public implementers are required to have necessity in urban management policy under local government. On the other hand, private LR projects basically are not required to have necessity—whether or not it is designated within urban planning; however, LR projects subsidized by central government must be designated in urban plans even if they are private projects.

The public sector has implemented LR projects of high urgency and social needs, such as post-disaster reconstruction, new town development and city center reconstruction. On the other hand, the private sector has tended to implement profitable LR projects generating high land value increases. LR cooperatives are organized by land rights holders within the LR project site, and have implemented most LR projects in Japan. The number and project area of LR projects in Japan are shown in Table 3.1.

Agreements from land right holders.¹¹ Private implementers are required to collect land right holder's agreement in the approval procedure. In the case of individual-implemented projects having several land right holders, a representative land owner must collect agreements from all of the other land right holders (i.e., an agreement ratio of 100 percent is required for individual-implemented LR projects). In the case of implementation by LR cooperatives or LR corporations, agreement of two-thirds of the land owners and two-thirds of the land lease holders is required. The agreement ratios are calculated both in terms of the number of land rights holders and land area. Although the requirement of agreement ratio is two-thirds under the LR Law, local governments as approvers generally suggest to collect the agreement of 80–90 percent in consideration of the project risk, since the larger the percentage of people who oppose or misunderstand the project, the more difficult the implementation may become. In addition, it is worth noting that the agreements are sought on the Implementation Plan

⁹ LR cooperatives are organized by land rights holders within the LR project site. To establish the LR cooperative, the applicant group (comprising seven or more land right holders) is required to have agreement of more than two-thirds of the land right holders. After establishment of the cooperative, all land right holders are registered as the cooperative members.

¹⁰ LR corporations are a type of special purpose company organized by land rights holders and a private company. This provision was added to the LR Law in 2005. To establish the LR corporation, land rights holders must invest more than 51 percent of the capital of the LR corporation.

¹¹ Public implementers are not required to collect agreement from land right holders.

Table 3.1: Number and Area of LR Projects in Japan (as of March 2013)

Category/Implementer		Completed		Under Implementation	
		No. of Project	Project Area (ha)	No. of Project	Project Area (ha)
LR under the former Urban Planning Law		1,285	67,862	—	—
LR under the LR Law		9,624	261,386	928	36,297
Public sector	Local government	2,244	102,012	504	20,925
	Central government	83	4,150	—	—
	Government corporations	385	26,969	35	4,462
	Sub-total	2,712	133,131	539	25,387
Private sector	Individual	1,293	17,512	51	890
	LR cooperative	5,618	110,738	337	10,016
	LR corporation	1	5	1	3
	Sub-total	6,912	128,255	389	10,909
Total		10,909	329,249	928	36,297

Source: Urban Regeneration and Land Readjustment Association, Japan.

and the articles of incorporation of LR cooperatives and LR corporations. The Implementation Plan is not required to include detailed plans relating to land replotting and compensation for each land right holder. These detailed plans are only formulated after the project approval.

Central government subsidy. Central government subsidy can be used for development of city planning roads in the LR project site. The maximum amount of subsidy is calculated by: (a) estimating a hypothetical cost of land acquisition, then adding (b) the compensation costs for the buildings and structures within the area of city planning roads, and also adding (c) the construction cost of roads. This is to provide comparability with the other subsidy programs for road construction. Since LR implementing bodies secure public lands for city planning roads through land contribution and not through land acquisition, but nevertheless have to spend (b) and (c), the amount for (a) can be used for other purposes, such as project management cost and compensation cost in areas outside the urban planning roads. In subsidized LR projects, more than 50 percent¹² of the total of land value

increase must be recouped into the project revenue through the sales of reserve lands.¹³ In other words, the development profits that land rights holders can obtain are limited to less than half of total development profits in the LR project supported by a central governmental subsidy. This subsidy system has promoted implementation of LR projects as well as development of urban infrastructure such as roads and parks while balancing public investments and land rights holders' profits.

Governmental technical and financial support for private LR projects. A private LR project can receive technical and financial support from central and local governments. A person or group who tries to implement a private LR project can apply to local government for technical support for preparation and implementation. Local government dispatches LR experts to support preparation activities such as land owners' meetings, feasibility study and

¹² This ratio has been the practice, while never formally stipulated.

¹³ There are the exceptions in cases where the LR projects did not increase the total land value.

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formulation of Implementation Plan, and provides subsidies for implementation activities and construction of public facilities under the local government's bylaw. This support system effectively promotes private LR projects under the local government's jurisdiction. LR cooperatives and LR corporations can obtain other public financial support, such as no-interest governmental LR funds.

Tax exemption for LR implementers and land owners. LR implementers can receive exemption and reduction of taxation. Tax exemption is granted for the real estate registration tax for replotting lands and for the sale of reserve lands, and for corporate tax and income tax on the LR cooperative and government corporations.¹⁴ Also, land owners whose land is expropriated or acquired receive a reduction in the income tax on the income they receive from compensation and land expropriation. These tax incentives motivate land right holders to apply and cooperate in LR. These supports are intended to foster future increases in social and economic value and tax revenue from real estate developed in LR projects.

Sales of reserve land. Reserve land is a major financial resource for LR projects. The LR Law provides that reserve lands can be sold by LR implementers to recover LR project cost and to be used for the purposes prescribed in the LR articles. The LR Law also provides the upper limit of value of reserve land: the total value of reserve lands must not exceed the increase in total value of the lands in the project site. These provisions secure benefits of land right holders regardless of their agreement or disagreement regarding project implementation.

Land exchange methods and land valuation. The main principles of land exchange under LR are securing the existing private land value and maintaining fairness among land rights owners. The land exchange and land valuation are targeting the private lands in the LR project. The fundamental framework—regarding average land contribution ratio, total land areas, and average land prices

before and after the LR project—is formulated through a 'project frame' as shown in Annex 3. Based on this framework, land exchange of individual land plot is calculated. In LR, there are three calculation methods for the size and location of replotted land: (a) land valuation-based method, (b) area-based method, and (c) mixed method using (a) and (b). Currently, the land valuation-based method is widely used. Under this method, the valuation is not based on the land price, but on the intrinsic value of each plot. As such, the results of the valuation are indicated by 'points', not 'Yen' in order to exclude external factors that affect land prices. The value of a land area after the project is calculated by multiplying the value of the existing land by the value-increasing ratio of the LR project. For each replotted area, value is obtained by division of the land value after the project by the unit land value of the replotted location. For instance, existing land with area of 1,000 square meters (m²) and value of 500,000 is provided with after-project land value of 750,000 (resulting from multiplication of 500,000 by the value-increasing ratio of 1.5). If the land is replotted in the area with the unit value of 1,000 per m², the replotted area is calculated as 750 m².

Regarding land valuation, although there are several kinds of land evaluation methods, the land value assessment based on accessibility, established in 1950, is widely used due to ease of use, which facilitates fast evaluation of many plots of land. If a land plot has better access by road, the unit value is higher. Based on this method, the total points in the area will be first calculated before and after LR and the value-increasing ratio is obtained. All the land parcels are entitled to be replotted so that the value for each parcel will be increased at the same value-increasing ratio. It is inevitable to have small differences (i.e., value more or less than this

¹⁴ When the cooperative sells the reserve land, the sale income is tax exempt. Note: this exemption also applies to individual-implemented and corporation-implemented LR.

entitled value), and that difference will be settled through an adjustment payment.

By comparison, UR is basically carried out based on the principle of keeping the value of the existing real estate, including buildings, the same before and after the project. The value of each building unit which is provided through the UR project must be equivalent to the value of the real estate before the project.

Land right protection by designation of land replotting plan. Securing of land rights at any point throughout the replotting process is most important both for the land right holders participating in an LR project and for the implementing bodies. In Japanese LR, the land replotting plan—indicating the location, figure, and area of replotted land rights—is officially designated before the LR construction stage. This is called “tentative designation of replotted land” because it is not final replotting until the survey after construction is done. Each replotted land parcel is legally connected with the original land right by the designated replotting plan. During implementation, land right holders keep their certificate of original land right. If necessary, the replotting plan can be altered. After the completion of the construction work, each of the replotted land parcels will be registered all at once based on the final replotting plan. This designation system secures land rights both of original and replotted lands during project implementation. Even in the case of complicated land replotting in urbanized areas, this protection measure can smoothly transfer original land rights to new land rights.

In addition, the LR law provides the correlation principle in land replotting so that replotting land shall be correlated with the original land in terms of location, area, soil condition, water utilization, land use, environment, and so on. This provision secures the similarity of conditions between replotting land and the original land. The LR Law also provides for exception to the above principle based on the land owner’s requests for specific purposes such as

promoting high-intensity land use and protecting owners of small land parcels.

Adjustment payment. The LR Law provides an adjustment method through monetary payment to correct for differences between the calculated replotted area and the measured area after development. The LR implementer pays or collects money to/from the land right holders based on the final replotting plan. This method can resolve minor differences in the values that could not be avoided in designing the replotting plan.

Special treatment for small land parcels. In the land replotting planning, small land parcels can be provided with special treatment, such as: (a) exchanging land for money; and (b) designation of minimum size of replotted land. Exchanging land for money is carried out through the adjustment payment *in lieu* of receiving the replotted land, based on the land owner’s request. Land contribution for small lands can be reduced by adhering to a minimum size designated by the LR implementer.¹⁵ To make up for the reduced contribution from small land parcels, land contribution for other larger land parcels may be increased.

Restriction of building activity. Building restriction in the LR project area is enforced by two stages of the planning and implementation process. In the planning stage, before approval of the LR project, the restriction under the Urban Planning Law is enforced (as described in the section on urban planning). Under the LR Law, after approval of the LR project, permission from the approver of the LR project is needed for any land development, new building, rebuilding, and/or extension of building that could possibly interfere with the LR project implementation, and any installation of unmovable structures. This provision functions to foster smooth implementation of LR projects.

¹⁵ These land right owners still have to pay an adjustment fee in such cases to ensure equity among the land rights holders.

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Temporary relocation. In order to undertake construction activities during the implementation stage, usage of specific land parcels by the holders of land rights in the project area is temporarily terminated by notification from the LR implementer. For houses and shops, the users temporarily rent other houses and shop buildings while they are unable to use their own. The cost, including rental fee and moving, is compensated by the LR implementer. In public LR projects in urbanized areas, there are some cases where the LR implementer constructs apartments for temporary relocation of the existing residents.

Forced relocation on site. LR implementers can relocate or demolish buildings and structures any time after expiration of the period stipulated on the relocation notification. In case of LR projects implemented by private implementers, once they have the required approval of the mayor of the municipality. This forced relocation is not a regular method, and is recognized as a last resort due to the time and costs associated with obtaining the approval and supervising of the relocation work. In fact, there are many cases to solve by negotiation before executing forced relocation.

Dispute resolution. Regarding dispute resolution, the implementer's implementation activities (e.g., designation of replotting plan) are defined as administrative disposition, which is eligible for request for examination under the Administrative Complaint Investigation Law. Persons and legal entities can submit a request for examination to the prefecture Governor or Minister of Ministry of Land, Infrastructure, Transport and Tourism (MLIT), depending on the type of the implementer. In case of dissatisfaction with the Governor's decision, the person or legal entity can submit a request for re-examination to the Minister of MLIT.

Penalty. The LR Law provides for penalty—for individuals, land right holders, executives of LR cooperatives and LR corporations and stakeholders—for bribery, concealments, obstructions and violations of governmental orders and inspections.

Combining LR and other land value capture tools.

In LR, a part of land value increase shall be contributed to reserve lands through land contribution. The remaining value belongs to private lands. Although Japanese LR doesn't have any tool to directly capture the remaining value from the project in order to use for other public purposes, administrative bodies can capture part of the remaining value through the levying of the real estate tax for all properties and urban planning tax¹⁶ for properties in urban areas. In addition, it is expected that revitalization of land use and activities will increase other tax revenues, such as corporate tax, income tax and consumption tax. This is one of the incentives of governmental support for general urban development and redevelopment projects including LR in Japan.

TYPLOGIES OF JAPANESE LR PROJECTS

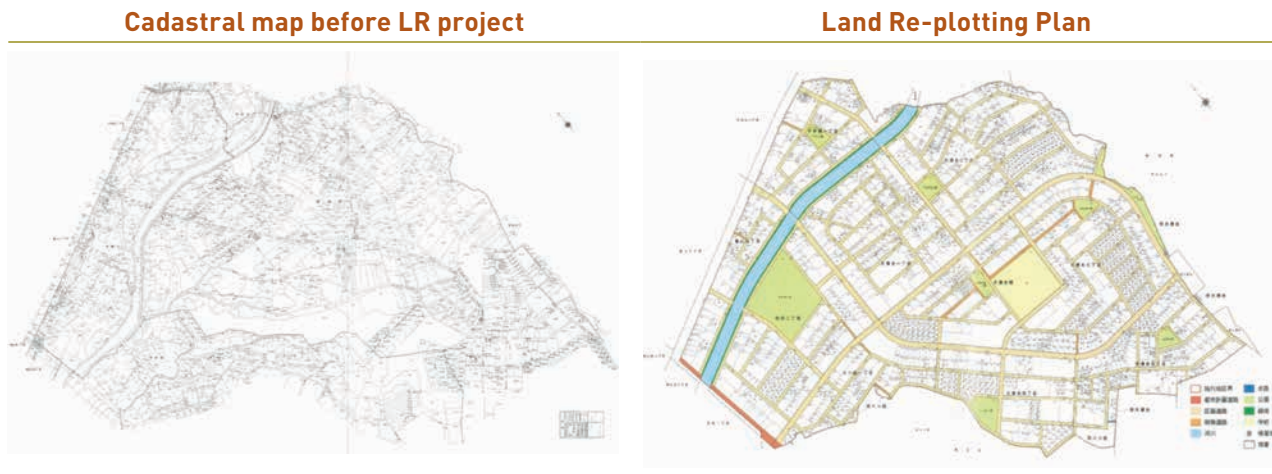
Given its flexibility, Japanese LR has been used to achieve multiple development objectives. The types of Japanese LR projects are categorized as follows:

- new town development in peri-urban areas;
- post-disaster reconstruction;
- city center and station area redevelopment;
- improvement of congested and wooden residential areas;
- integrated LR with railway development; and
- small-scale LR for land consolidation in urbanized areas.

New town development in peri-urban areas. The most typical LR projects in Japan are those that aim to develop large- and medium-scale residential areas in agricultural land and vacant land areas. During the period of huge housing demand in the 1950s to 1990s, LR supplied numerous housing lands. LR

¹⁶ One kind of real estate tax imposed by some municipalities in Japan.

Figure 3.1: New Town Development in Peri-urban Area



Source: Memorial Bulletin of Hirate Nanbu LR Project, Hirate Nanbu LR cooperative, Nagoya City.

cooperatives are often adopted as the implementing entity due to profitability and ease of operation. Most of the LR cooperative project have utilized sales of reserve land as the major financial resource. Figure 3.1 illustrates an example of new town development in a peri-urban area.

Post disaster reconstruction. LR has been applied for urban reconstruction after WWII and after the Great Kanto Earthquake of 1923. In recent years, post-earthquake LR projects have been implemented after the Great Hanshin Earthquake in 1995 and the Great East Japan Earthquake in 2011. In Kobe City (see Figure 3.2), 13 LR projects with a total area of 145 ha have been implemented for post-earthquake reconstruction. In these projects, effective use of collective land replotting into a large-scale site has supported apartment development, and land right exchanging with money has provided support for livelihood restoration of the disaster affected people.

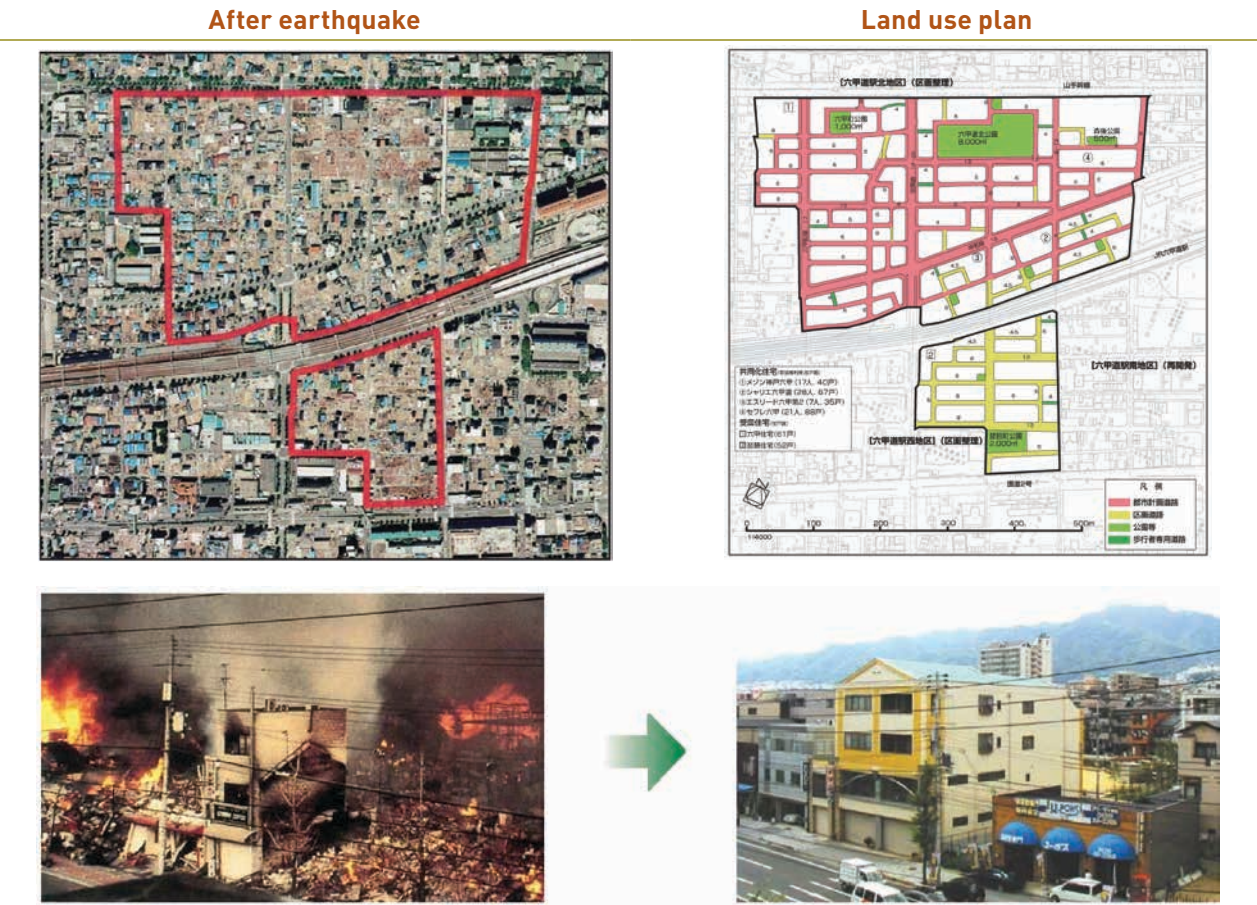
City center and station area redevelopment. To meet the objective of urban redevelopment for city center and station areas (see Figure 3.3 for an example), LR is applied for land and infrastructure development. This type of LR project is mostly

implemented by local governments due to urgency, high-priority, complication of existing land rights and financial constraints,¹⁷ but is also implemented by railway companies and the Urban Renaissance Agency (URA). In this type of project, land replotting is effectively used for consolidation of vacant lands and private lands for the improvement of the land use, and for creating spaces for urban facilities such as arterial roads and station plazas. Simultaneously with the LR project, other related projects—such as commercial complex development, station building reconstruction and railway elevation—are implemented by local government, private companies and the railway companies.

Integrated LR with railway development. Under this category, there has been only one special case so far—the Tsukuba Express Railway (see Figure 3.4). Tsukuba Express connects Akihabara in Tokyo and a suburban research and development area and has total length of 58km with 22 stations. To secure the right of way for the railway facilities, a special methodology—using a combination of prior-LR land acquisition and land replotting—was established

¹⁷ Because there is little space available to create reserve lands.

Figure 3.2: Post-Earthquake Reconstruction LR Project



Source: Rokkomichi North Station LR Project and Rokkomichi Western Station LR Project, Kobe City.

Figure 3.3: Station Area Redevelopment



Source: Akihabara Station Area LR Project, Tokyo.

Figure 3.4: Integrated LR with Railway Development



Source: Kashiwa Hokubu East LR Project, Urban Renaissance Agency, Japan.

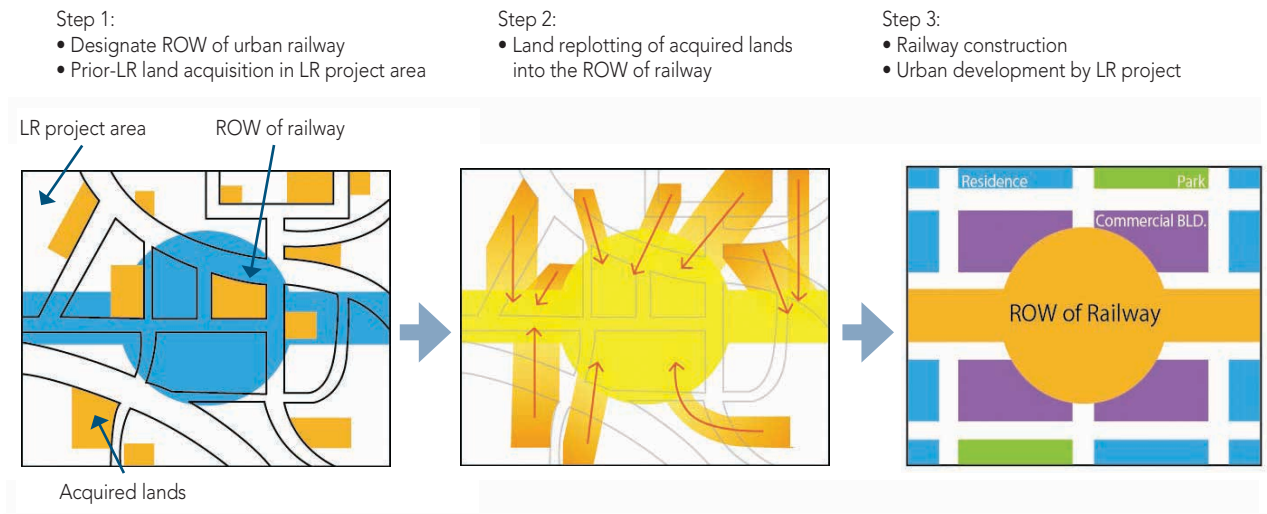
under the Law on Special Measures Concerning the Promotion of Integrated Urban Development with Railway Development in Metropolitan Area.

Parts of the section of the right of way were secured through this method and 15 station areas were developed by the LR project.

This method aims to widely cover target lands which are easy to acquire. The outline of the methodology is shown in Figure 3.5.

Improvement of congested and wooden residential areas. This type of LR aims to improve the safety and disaster prevention of urban

Figure 3.5: Methodologies of Integrated LR with Railway Development



Source: Author.

Figure 3.6: Improvement of Congested and Wooden Residential Area

Before



After LR project



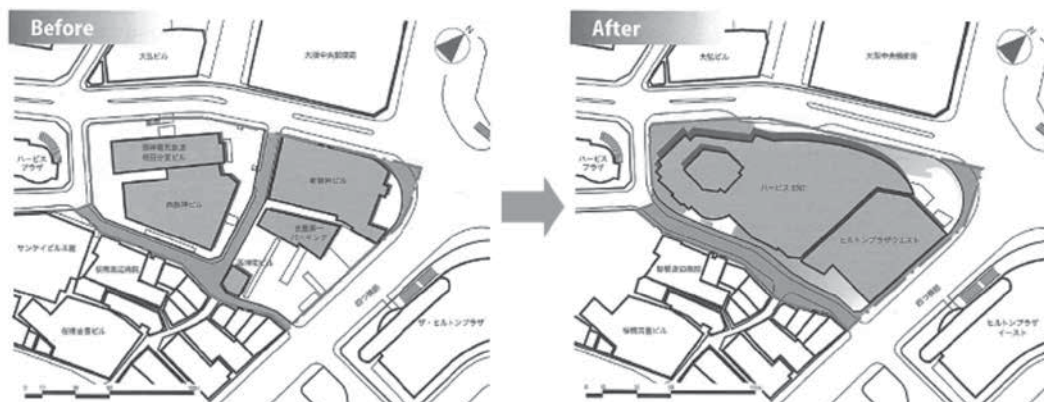
Source: Suehiro Minami LR Project, Kadoma City, Japan.

infrastructure and buildings in existing congested residential areas with wooden structures (see Figure 3.6 for an illustration). The LR project has the specific objectives such as: (a) securing evacuation routes and public spaces to prevent fires from spreading; (b) promoting reconstruction of old buildings having high risks of collapsing and burning down; and (c) land consolidation to support collective reconstruction for apartments.

Small-scale LR for land consolidation in urbanized areas. This type of LR has been used for maximizing

the usability of private lands and vacant lands in urbanized areas. The major objectives of this type of LR are land consolidation and replacement of existing roads. This type of LR does not require increasing the amount of area for public facilities; hence, land contribution is not always necessary. In addition, where appropriate, application of exceptional or reduced standards for road width and park areas is encouraged, based on the LR Management Guideline published in 2001. Through land replotting, the land owners can receive a collective land lot to be used for large-scale building construction (see Figure 3.7).

Figure 3.7: Small-scale LR for Land Consolidation in an Urbanized Area



Source: Land Readjustment Promotion Agency, Umeda 2-chome LR project, Osaka.

PROFILES OF SELECTED LR PROJECTS

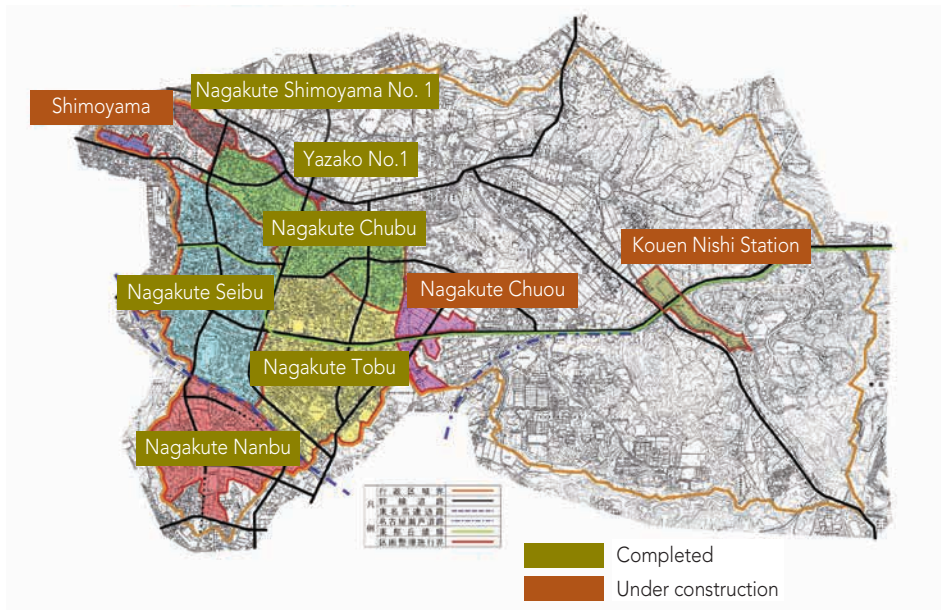
NEW TOWN DEVELOPMENT IN PERI-URBAN AREAS: NAGAKUTE NANBU LR PROJECT IN AICHI PREFECTURE

Background. Nagakute City is a city adjoining Nagoya, which is the third largest city in Japan. As of 2015, the city has an estimated population of approximately 58,000, and total area is 21.6 square kilometers. Until the 1960s, the city's population was approximately 10,000 and most of the city area was covered by farm lands and forests. After opening a terminal station of the urban railway in

1969, new town development using LR was promoted by the city government.

To date, nine LR projects have been implemented by phases in the city area. The total project area is 599 ha, which covers 80 percent of the urbanization promotion area. Among the nine projects, eight projects were implemented by LR cooperatives. As a result of the well-controlled urbanization, Nagakute city was chosen by the City Data Pack in 2015 (published by Toyo Keizai Inc.) as the third-best livable city in Japan. The locations of the nine LR projects are shown in Figure 4.1.

Figure 4.1: Location of LR Projects in Nagakute City



Source: Nagakute City.

OVERVIEW OF THE NAGAKUTE NANBU LR PROJECT:

- Project Area: 98.2 ha
- Implementer: Nagakute Nanbu LR cooperative
- Number of Land Right Holders: 780
- Project Period: 17 years (from 1998 to 2015)
- Total Expenditure: 20.8 billion JPY (208 million USD)
- Average Land Contribution Ratio: 39.86%
- Planned Population: 5,000 people

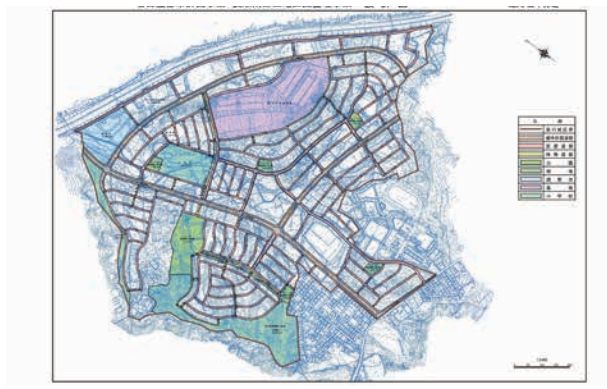
Preparation of the Nagakute Nanbu LR project started since 1990. At that time, the project area was mostly covered by farm lands and forests within the urbanization control area. Motivation for the project came from the land owners who were concerned about environmental deterioration from increasing dumping of garbage and lack of public infrastructure. The land owners' group conducted study meetings and surveys to discuss the need for town development. For two main reasons—difficulty of land acquisition and importance of land owners' participation—they chose the LR scheme. In 1993 the preparatory meeting was held to formulate the Implementation Plan and establish the LR cooperative, with technical support provided by the municipality. In 1997, the project area was

incorporated into an urbanization promotion area, and the LR project, urban facilities and zoning plan were designated on the urban plan. Through the legal procedures, the LR cooperative and the Implementation Plan were approved in 1998.

Overview of the LR Project. The Nagakute Nanbu LR project aimed to develop a new town with residential area, commercial and business area, a primary school and a nursery school, and green parks and cemetery areas, under the concept of “People and Nature-friendly Town”. The project included development of four roads designated on the urban plan. The project was implemented by an LR cooperative organized by the land right holders in the project area. The project cost of 20.8 billion JPY (208 million USD) was covered by central government subsidy, municipal subsidy and sales of reserve land. The sales of reserve land were the major financial resource accounting for 67 percent of the total revenue. Around 40 percent of the total area of private lands was used for both public facilities and reserve lands through the land contribution. The project was completed in 2015.

The land use plan is shown in the Figure 4.2 and Figure 4.3 shows the site conditions before and after the LR project. The project frame abstracted from the approved Implementation Plan is described in Annex 3.

Figure 4.2: Land Use Plan of Nagakute Nanbu LR Project



Source: Nagakute Nanbu LR Cooperative.

Notable features. For the enhancement of the convenience and amenity as a new town area, and promotion of the project finance, the LR cooperative applied special techniques and programs as described below.

(a) Request-basis land replotting. For the commercial area development in the center area, collective land replotting based on the land owners' request was used (see Figure 4.4). Lands for which the owner wanted to join the lease business were collectively replotted into the large-scale commercial block. The shape of each replotted land parcel was designed to be long and narrow in order to avoid

Figure 4.3: Site Condition Before and After the LR project



Source: Memorial Bulletin of Nagakute Nanbu LR.

its individual land use.¹⁸ After the replotting, the land owners collectively leased their lands to a commercial developer to build a shopping center.

In addition, the project included an eco-friendly residential area in the southern area with natural and hilly landscape. This was also carried out through a request-based land replotting.

(b) District plan and cityscape guideline. A District Plan, which controls land use and building profiles in more detail than the zoning plan, was designated

¹⁸ The LR law does not allow conversion of a group of individually owned land parcels into a jointly-owned parcel in order to protect property rights of individual landowners, except for special cases for small land parcels.

Figure 4.4: Collective land replotting for commercial area



Source: Nagakute Nanbu LR Cooperative.

Figure 4.5: House and Open Space with Planting



Source: Tamano consultants Co. Ltd.

in the project area. The plan regulates minimum land size, construction line, advertisement, structure of fences, building height, and specific land use. In addition, a cityscape guideline was formulated to control wall and roof color, size and illumination of advertisement, and to promote planting in open spaces (see Figure 4.5). The plan and guideline had an effect not only in terms of improving the living environment, but also increasing land value which is important for cost recovery through the sale of reserve lands.

(c) Promotion for sales of reserve land. With the stagnation in the housing market in Japan, the sale of reserve lands is key to successful implementation of an LR cooperative project. In the replotting plan, priority was given to having the reserve lands at good and commercially attractive locations before assigning lands for replotting. In addition, promotion targeting housing companies started in the beginning stage in order to incorporate the opinions of the housing company (as the buyer) in terms of the land use plan and replotting plan. Through those efforts, the reserve lands were sold earlier than expected.

(d) Local government subsidy. The LR cooperative received financial support from Nagakute City in accordance with the municipal bylaw. The subsidy

covers a part of the cost for the project's activities (e.g., establishment of LR cooperative, securing public land for a part of the road exceeding the width of 12 m, drainage, green park, and administration costs). This helped to secure profitability for the LR cooperative and promoted the LR cooperative's project.

(e) Establishment of town management association. The LR cooperative implemented not only the LR project, but also nature-friendly activities for the community including new residents. The LR cooperative had conducted several community events for planning, agricultural experience tour, and wildlife preservation activities in the green area in the project site (Figure 4.6). However, the LR cooperative had to be dissolved at the end of the project according to the LR Law. For the continuation of the LR cooperative's mandates, a town management association, Nagakute Minami Satoyama Club, was established by the members of the LR cooperative. The town management association continues to implement those community-based activities, collaborating with the municipality, universities and private companies.

Key results of LR project:

The development effect of the LR project is summarized as follows:

Figure 4.6: Community Events in Project Area



Source: Tamano consultants Co. Ltd.

- city road network was developed, connecting to other neighboring cities and public green park;
- creation of new town brought convenience and defined the cityscape;
- promotion of private buildings (such as residences, apartments, and shops) constructed by land right holders and buyers of reserve created new uses of land; and
- the number of residents in the LR project area increased from 30 to 5,000 people.

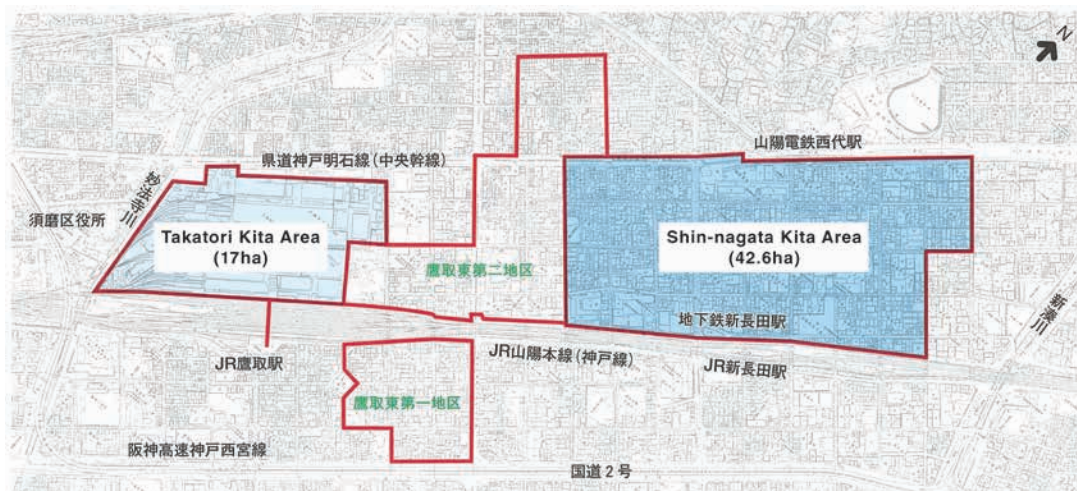
POST-EARTHQUAKE RECONSTRUCTION: SHIN-NAGATA EKIKITA POST-EARTHQUAKE RECONSTRUCTION LR PROJECT IN KOBE CITY

Background. The Shin-nagata Ekikita area is one of the enormously damaged areas affected by the Great Hanshin Earthquake that occurred on the 17th of January 1995. The earthquake brought about 4,600 deaths, with 15,000 injured in Kobe City only. 123,000 buildings collapsed or were partially destroyed, and 7,000 building were burned. In the project area, around 80 percent of the buildings were demolished or partially destroyed by the earthquake and fire. Before the earthquake, Shin-nagata area was a congested urbanized area with many small,

wooden houses along narrow passages, and small factories and workshops of shoe manufacturers. The local industry had been on the decline due to the aging workforce and intensification of international competition. For urban reconstruction, Kobe City urgently designated the Shin-nagata Kita area (42.6ha) as an LR project on the urban plan in March 1995. The project plan of the LR was approved in July 1996. In addition, the Takatori Kita area (17 ha) was incorporated into the LR project in 1997. Figure 4.7 illustrates the location of the LR project area.

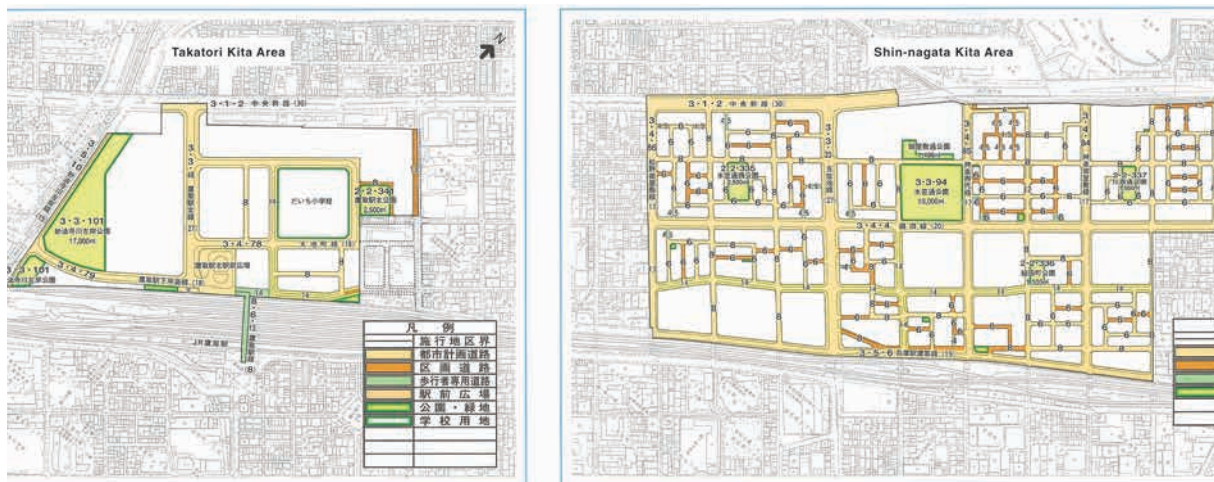
Overview of the LR Project. The project area consists of two areas: (a) Shin-nagata Kita area, a congested area with many wooden houses; and (b) Takatori Kita area, part of a huge factory land parcel owned by the railway company. The LR project's objectives were to reconstruct the urban facilities and improve land use as well as the livelihoods of the disaster-affected residents in Shin-nagata Kita area. Takatori Kita area was incorporated into the LR project to develop a new housing area with disaster-prevention function and providing commercial and cultural facilities. The LR project was implemented by Kobe City. The project cost of 103 billion JPY (1.03 billion USD) was covered by public funds such as central government subsidy, contribution for urban park construction, and municipal general budget. Reserve land was not secured due to a

Figure 4.7: Location of Shin-nagata Ekikita Post-earthquake Reconstruction LR Project



Source: Kobe City.

Figure 4.8: Land Use Plan of Shin-nagata Ekikita Post-earthquake Reconstruction LR Project

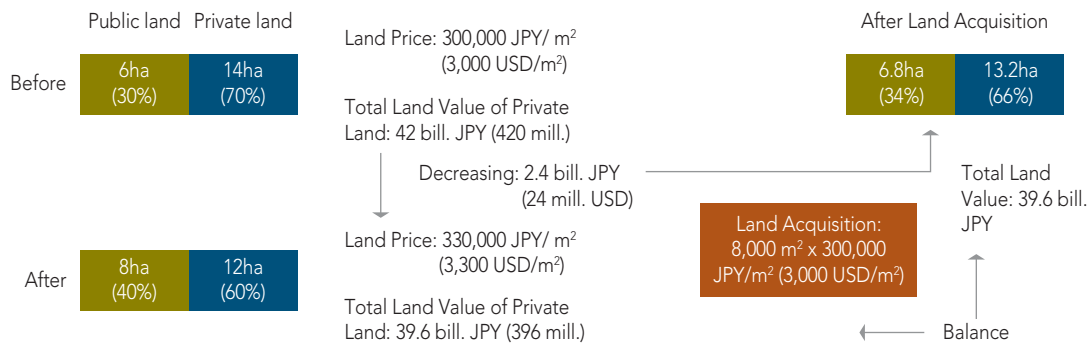


Source: Kobe City.

OVERVIEW OF THE LR PROJECT:

- Project Area: 59.6 ha [Shin-nagata Kita Area: 42.6ha, Takatori Kita area: 17ha]
- Implementer: Kobe City
- Number of Land Rights: approximately 2,400
- Project Period: 17 years (from 1995 to 2011)
- Total Expenditure: 103 billion JPY (1.03 billion USD)
- Average Land Contribution Ratio: 15.07%

decrease in total land value. The average land contribution ratio for both areas was 15.07 percent. Within Shin-nagata Kita area, the average land contribution ratio was set at 9 percent in consideration of existing small land lots with an area of around 40 m². In addition, land contribution for small plots with an area of 60 m² or less was reduced to 0–9 percent as a special treatment. The project was completed in 2011. The land use plan is shown in Figure 4.8.

Figure 4.9: Model of total land value decreasing and the balancing by land acquisition

Notable features. For the reconstruction of urban facilities and livelihoods in disaster-affected areas, the LR project applied special techniques and programs as described below.

(a) Land acquisition as a means of compensation due to decrease in total land value. Most LR projects aim to increase land value; however, in some cases, in urbanized areas, the total land value of private land after the LR project is lower than it was before the LR project. The decrease in private land value is a result of a combination of land contribution from private to public land and small increases in land unit price due to the already high unit price of existing land. According to the LR Law, the LR implementer must compensate if there is a decrease in land value. In reality, it is commonly practiced that the public LR implementer acquires lands before LR instead of paying the compensation after LR. The purchased lands are defined as public lands, which decreases the pre-LR total value of private land. As the result, the total value is balanced between before the LR project and after. The calculation model is shown as Figure 4.9.

In the Shin-nagata Ekikita LR project, the land value was estimated to have decreased by 27 billion JPY (270 million USD). Kobe city purchased lands instead of paying the compensation later, and reclassified the purchased lands to public land. The land

acquisition supported the speedy resettlement of the disaster-affected peoples.

(b) Joint apartment development using collective land replotting. In the project area, many of land right holders lost their houses due to the earthquake and fire. The reconstruction faced a number of challenges, such as: (a) under the current building code, it was impossible to secure the same living spaces as before the disaster; (b) land right holders lacked their own budget due to old age and “double loan” problem.¹⁹ To address this, joint apartment development was proposed. Through the coordination and participation of the land right holders, eight apartment projects were implemented in the LR project site (see Table 4.1 and Figures 4.10 and 4.11).

Those apartment projects were ordinary building projects—not following the UR Law, in order to avoid losing time to the legal procedures. Land rights holders who joined the apartment development were replotted into the apartment project site. After designation of the land replotting plan, the apartment developer temporarily purchased the participants’ land rights, under a contract that

¹⁹ Households already had a loan for the house they owned. When their house was demolished or burned by the earthquake and fire, in order to re-build they needed to take out another loan -- while they still had the original loan as well.

Table 4.1: Joint Apartment Development in Shin-nagata Ekikita LR Project

	Land Area (m ²)	Participated land right holders	Apartment Plan		
			Total housing (unit)	Housing for sale (unit)	Shop (unit)
1	2,072	42	99	67	15
2	1,639	25	93	63	3
3	1,033	19	35	21	7
4	1,669	45	88	56	22
5	1,226	20	73	48	2
6	651	19	18	12	-
7	728	17	34	20	2
8	195	5	11	5	1

Source: Kobe City.

Figure 4.10: Location of Joint Apartment Development

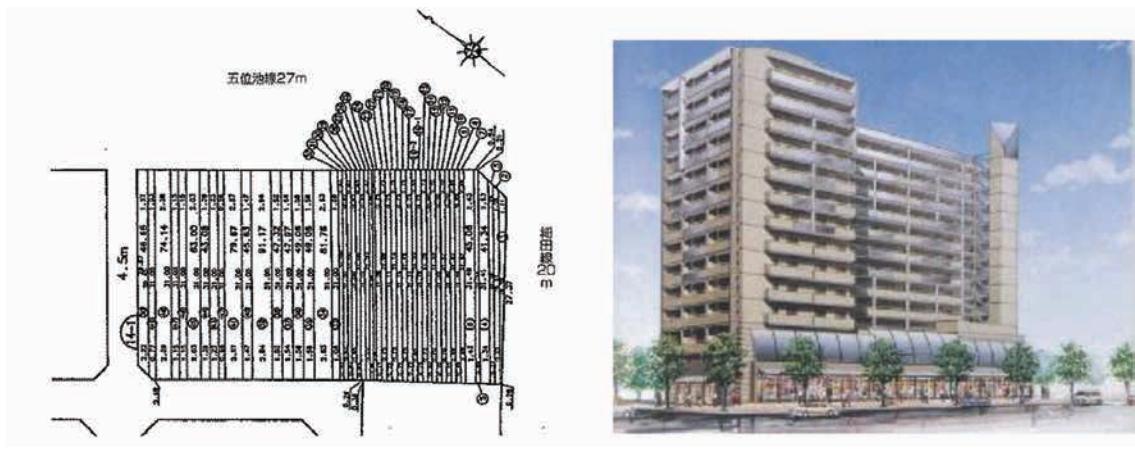


Source: Kobe City.

described the condition for returning the rights with an apartment unit. After development, the developer sold a part of the apartment building to the market to recover the development costs. Then, the original land right holders received the remaining apartment units. This process supported livelihood recovery as well as disaster prevention of housing, and also promoted high-intensity land use while keeping the existing community intact.

(c) Proposal of land use plan from Residential Town Planning Committee. Shin-nagata Kita area

Figure 4.11: Collective Land Replotting for Joint Apartment Development



Source: Kobe City.

consists of more than 20 urban blocks with an area of approximately 1 ha each block. Kobe City decided to establish twenty-one units of the Residential Town Planning Committees in each community after the designation of the LR project on the urban plan. The activities of the committees were supported by town planning experts such as university professors and consultants who were dispatched by Kobe City. Each committee formulated a local land use plan for each urban block, with technical advice provided by the town planning expert, and proposed it to Kobe City. Based on the proposal, Kobe City adjusted the land use plan of the LR project. In addition, the committee discussed joint apartment development, as previously described, and also proposed an increase of the designated FAR, to improve feasibility of the apartment development. Then, Kobe City adjusted a part of the Zoning Plan and formulated the District Plan in order to support the joint apartment development.

Key results of the LR project:

The development effect of the LR project is summarized as follows:

- disaster prevention of the project area was improved through widening city roads, creating community roads and open spaces, newly-built buildings with aseismic and fireproof structure, and construction of a fire prevention water tank;
- livelihood rehabilitation of disaster-affected people was aided by the exchange of money for existing land rights through land acquisition before approval of the LR project, and joint apartment development using collective land replotting.
- the population in the project area increased from 7,587 persons before the earthquake in 1994 to around 9,400 persons after completion of the LR project in 2011; and
- the cityscape in the project area was improved by development of underground power lines and cityscape guidelines formulated by the Residential Town Planning Committee.

STATION AREA REDEVELOPMENT: AKIHABARA STATION AREA LR PROJECT IN TOKYO

Background. Akihabara station area is located at the city center of Tokyo, just 2km north of Tokyo Station. It has an important transport hub function in Tokyo and is also one of the world's largest shopping areas for electrical product, with both big vendors as well as many medium- and small-size shops. Previously, the area had huge vacant lands along the railway tracks that were used for a public vegetable market and a freight depot. The market land (area of 2.7 ha) was owned by the Tokyo Metropolitan Government. The freight depot land (area of 3.2ha) was owned by the former Japanese National Railway Settlement Corporation. In 1993, a decision was taken to build a new urban railway, the Tsukuba Express, which provides a 58km-long connection between Akihabara station and a research and development area in Ibaraki prefecture.

The Tokyo government included redevelopment of the vacant lands in the Akihabara station area in the 3rd long-term development plan in 1990, and formulated the conceptual plan for the urban redevelopment in 1992. In the conceptual plan, LR would be implemented by the Tokyo government for the redevelopment due to the necessity to reorganize land rights of the huge vacant land parcels and surrounding small private lands. Furthermore, urban control and

OVERVIEW OF THE LR PROJECT:

- Project Area: 8.76 ha
- Implementer: Tokyo Metropolitan Government
- Number of Land Right Holders: 35 (as of project approval)
- Project Period: 19 years (from 1997 to 2015)
- Total Expenditure: 34.6 billion JPY (346 million USD)
- Average Land Contribution Ratio: 35.10% (34.22% for public land, 0.88% for reserve land)

Source: History of Akihabara Station Area LR Project, Tokyo Metropolitan Government.

**Figure 4.12: Akihabara Station Area
(Before construction in 1997)**



Source: Tokyo Metropolitan Government.

Figure 4.13: Route Map of Tsukuba Express



Source: Japan Railway Construction, Transport and Technology Agency.

integrated land use were to be achieved by applying the District Plan and guidelines. The LR project and the related urban facilities were designated in the

urban planning in 1996. The Implementation Plan of the LR project was approved in 1997.

Overview of the LR Project (see Figures 4.12 and 4.13). The LR project's objective was to redevelop the Akihabara station area, including the huge vacant lands, for urban land use with commercial, office, residential and cultural facilities. It also aimed to achieve synergy with urban transportation and enhancement of urban function utilizing the existing characteristic as an electrical shopping town.

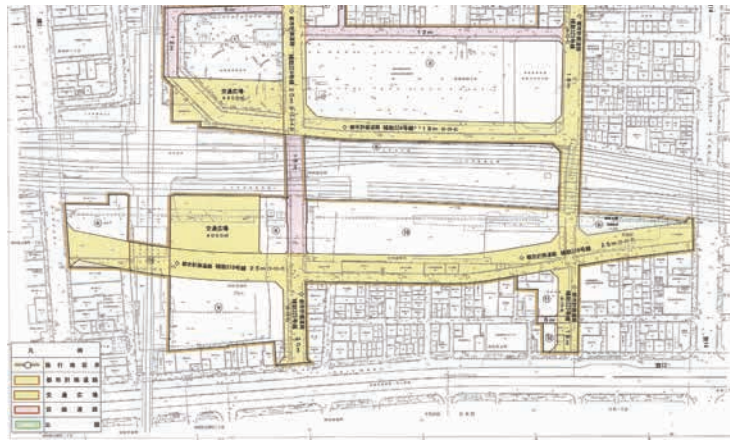
The development concept targeted to introduce three urban functions: (a) innovation hub for digital media and next-generation industries; (b) communication and information function; and (c) living and accommodation function. The LR developed four city roads designated in the Urban Plan, including two station plazas, and community roads and a park. The project cost of 34.6 billion JPY (346 million USD) was covered by a central government subsidy, Tokyo government's general budget, and sales of reserve land (600 m² of 2.3 billion JPY (23 million USD)). The average land contribution ratio was 35.10 percent, and was mostly used for securing of public facility land. The basic design of public facilities is shown in Figure 4.14.

The replotting plan was designated in 1998. After land rights registration for replotted lands in 2011, the project was completed in 2015. Figure 4.15 illustrates the private urban development that has taken place in the Akihabara Station area.

Notable features. To achieve the project objective, the LR project applied special techniques and programs as described below.

(a) Designation of Urban Renaissance Urgent Redevelopment Area (URURA). The URURA is a central government program to support creation of urban centers in large-scale cities through public-private collaboration under the Act on Special Measures Concerning Urban Renaissance, established in 2002. In the area, designated urban

Figure 4.14: Basic Design of Public Facilities of Akihabara Station Area LR Project



Source: History of Akihabara Station Area LR Project, Tokyo Metropolitan Government.

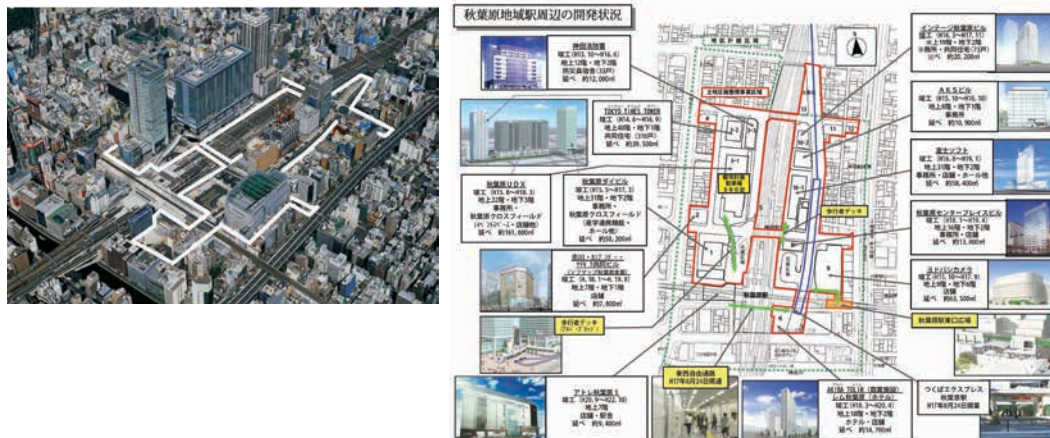
development projects can receive special measures such as: deregulation of land use control, private proposal of urban planning, expediting of legal procedure, and Minister’s permission for financial support²⁰ and tax reductions.²¹ In addition, relevant government offices and local government strongly promote projects and programs for urban renewal under the development policy decided by the Urban Renaissance Headquarters of the Prime Minister’s Office. At present, 63 areas with a total area of 8,372ha are designated as URURA in Japan.

Akihabara and Kanda Area, with an area of 157ha including the LR project urban area, was designated

²⁰ Long-term loan with stable interest rate for middle-risk investments for private urban renewal projects.

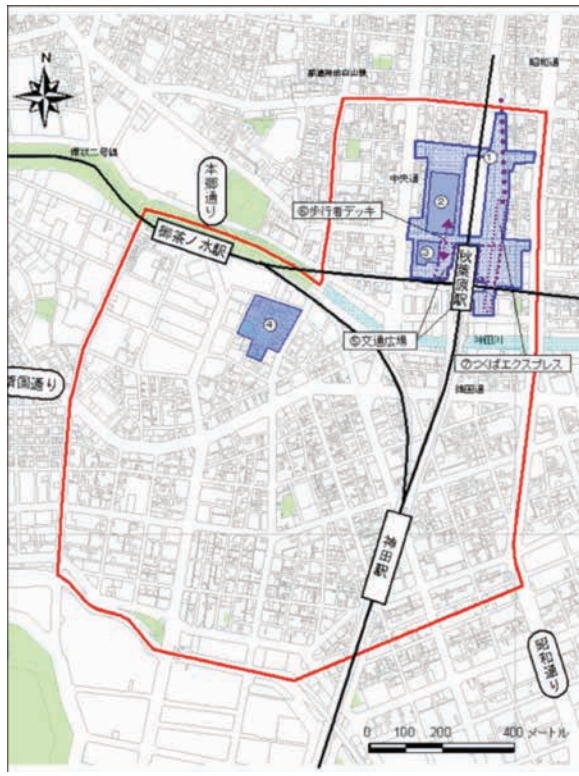
²¹ Tax reduction is applied to (a) real estate acquisition tax on land acquisitions by the certified project implementers; (b) income tax, corporate tax, registration and license tax, real estate acquisition tax, real estate tax and urban planning tax on building constructions by the certified project implementers; and (c) income tax and corporate tax on land transaction from land owners to the certified project implementers.

Figure 4.15: Private Urban Developments in Akihabara Station Area



Source: Chiyoda Ward Office, Tokyo

Figure 4.16: Urban Renaissance Urgent Redevelopment Area of Akihabara and Kanda



Source: Prime Minister's Office, Japan.

OUTLINE OF AKIHABARA UDX:

- Project Area: 1.1 ha
- Building: 22 stories and 3 stories of basement
- Floor area: 161,600sqm
- Floor use: office, shops, event space
- Construction Period: 3 years (from 2003 to 2006)

Source: Chiyoda Ward Office, Tokyo.



as an URURA in 2002 (Figure 4.16). The development policy aims to create an urban core of IT industry through land use renewal using huge vacant lands. In the Akihabara and Kanda Area, the special measures of the URURA related to: (a) financial support and tax reduction for a private urban reconstruction project in the LR project area; and (b) deregulation of the maximum floor-area-ratio for UR projects and private urban reconstruction projects—which are designated as a Special Urban Renewal District in the area outside of the LR project (but still within the URURA).

(b) District plan. The District Plan was designated in the project area. The plan designates urban facilities, such as roads and open spaces, and regulates land use and building in detail in terms of land size, FAR, construction line, advertisement, structure of fences, building height, specific land use and eco and green technologies. In particular, deregulation of the FAR is provided for two urban blocks to promote large-scale urban development projects .

(c) Special Purpose Company for Commercial and Office Complex. For the development of a commercial and office complex in the LR project area, a special purpose company, UDX, was established by investment companies. The UDX developed the Akihabara UDX Building and leased its floors to tenants. In the beginning of the establishment of the UDX, the project cost was funded from the sale of preferred equities issued by the investment companies and project finance aiming to achieve high profitability. For the development, UDX purchased replotted land owned by Tokyo government. The project scheme is shown in Figure 4.17.

(e) Effect of the LR Project²²

In the History of Akihabara Station Area LR Project, the development effect of the LR project is summarized as follows:

²² Source: History of Akihabara Station Area LR Project, Tokyo Metropolitan Government.

Figure 4.17: Project Scheme of Akihabara UDX



Source: Author based on information from UDX.

- convenience for shopping, pedestrian safety, and cityscape were improved;
- in the surroundings of the LR project area, the number of offices related to the IT industry has increased 30 percent (194 offices) over six years (since 2000);
- 121 new apartment buildings (total floor of 480,000m²) were developed and the population increased 27 percent (681 people); and
- the total economic multiplier effect of the LR project was 10 times the investment: (i) building relocations in the LR project area triggered private construction investment equivalent to 6.4 times the compensation cost; and (ii) construction for the LR project and related private development created economic activities, such as procurement of construction materials and other consumption, amounting to 2.55 times the construction cost.

CONCLUSION

LR in Japan has been used quite successfully for various kinds of urban development countrywide over a long period of time. LR realizes reorganization of fragmented land parcels and supports development of public facilities through land contribution. This can be achieved while firmly protecting land rights throughout the replotting process. Two main factors have contributed to the need for LR in Japan: (a) highly fragmented patterns of land ownerships resulting from establishment of the modern land management system in the 19th century and the Agrarian Reform in 1940s; and (b) low share of publicly owned land in urbanized areas. At the same time, a number of factors have contributed to the success of LR as a community-based development tool in Japan, including: (a) strong land ownership rights, secured by the modern land management system since the 19th century; (b) general trend of increasing land price; (c) provision of framework to support community-based LR; (d) good governance, with government's consistent urban management policy; (e) local governments have political and financial autonomy, including taxing power which generates budget for local government to support LR; (f) capacity at prefectural and municipal governments as well as the private sector; (g) comprehensiveness of urban planning system covering all aspects of land uses, urban development and infrastructure into one integrated system; (h) people's recognition of the value of land and awareness about the advantages of town improvement; and (i) provision of government subsidies and incentives with respect to taxation.

To effectively apply LR in developing countries, it is important to:

- clarify the need for and objectives of applying LR in terms of its contribution to social and economic benefit in the major cities and countrywide;
- clarify the process for LR and its relation with urban planning, incorporating the definition of LR into the urban planning system while maintaining consistency with the government's urban management policy;
- have clarity, with as much detail as possible, in the decision making procedure;
- make available governmental technical and financial support in order to promote effective undertaking of LR and to provide incentive;
- establish other land-based financing mechanisms such as property taxation to generate resources to support sustainable development;
- establish effective uses of land replotting, such as: collective replotting for large-scale land use, converting land rights to building floor area rights, special consideration for small land plots, and responding to land use demand and accommodating specific purposes;
- secure land rights and ensure fairness in land replotting and land valuation in order to promote consensus building among land right holders;
- delineate appropriate requirements for agreements;
- consider the compulsory relocation clause as a last resort; and
- ensure that measures are in place to prevent activities such as land development and building construction that would otherwise harm LR implementation.

Annex 1: History of LR in Japan

Year	Topics	Explanation
1872–1899	Establishment of modern land management system	Certificates of land title had been published since 1872, and the cadastral maps covering the whole country, without Hokkaido and Okinawa, were completed in 1885. The Real Property Registration Law was established in 1899.
1899	Establishment of Agricultural Land Consolidation Law	ALC was established for agricultural land development. The ALC projects were implemented by landowners' cooperatives, and the expenses were raised by landowner's own budget and subsidy of local government.
1919	Establishment of LR under the Urban Planning Law	Provisions of LR were added into the Urban Planning Law. Institutionalization of LR is understood to have been with reference to a German LR Law. ^a Provisions of the ALC Law were applied to the implementation procedure of LR.
1923	Application of LR to post-earthquake reconstruction	LR was applied to the post-earthquake reconstruction of Tokyo region after the Great Kanto Earthquake. For the smooth implementation in financing, replotting and compensation, the Special Urban Planning Law was established in 1923. ^b After the completion of the LR projects, the Law was repealed in 1940.
1933	Formulation of design guideline for LR	Based on the experiences of LR, the design guideline for LR was formulated by the Government.
1946	Application of LR to post-war reconstruction after World War II	LR was applied to urban reconstruction in war-damaged cities across the whole country. For implementation, the Special Urban Planning Law was established again in 1946, and the rule of LR was improved to allow for national subsidy for local governments and to protect small land plots in consideration of the serious economic and land situation.
1947–1950	Implementation of Agrarian Reform	The central government expropriated agricultural lands from huge landowners and distributed those land rights to the tenant farmers. As a result, the increasing number of agricultural landowners prompted the need for LR.
1949	Repeal of ALC Law	The ALC Law was repealed, and the Land Improvement Law was established, focused on agricultural land development. As a result, LR lost the legal basis for its implementation procedure.
1954	Establishment of LR Law	The LR Law was established by utilizing the experiences of LR projects and related old laws such as the Urban Planning Law, the Special Urban Planning Law, and the ALC Law.
1950s-	Implementation of large-scale LR projects in rapid economic growth	Large-scale LR projects had been implemented for housing supply to address huge population growth in the major metropolitan areas. For the promotion of LR projects, the central government established financing programs, such as the national subsidy, by using the Special Account for Road Construction and no-interest loans for LR cooperatives.
1955	Establishment of Japan Housing Corporation (JHC)	JHC was established to implement new town developments and develop, sell and rent social housing. In new town LR projects, JHC secured lands for construction of social houses in the LR project site.
1968	Establishment of the Urban Planning Law	The new Urban Planning Law was established to control rapid urbanization. The LR project was defined as one of the urban development projects under the Law.
1995	Application of LR to post-earthquake reconstruction	LR was applied to urban reconstruction after the Great Hanshin Earthquake. In the LR projects, a land replotting system was effectively used for integration with apartment development—and the exchange of land rights to money helped with livelihood restoration for the earthquake-affected land owners.

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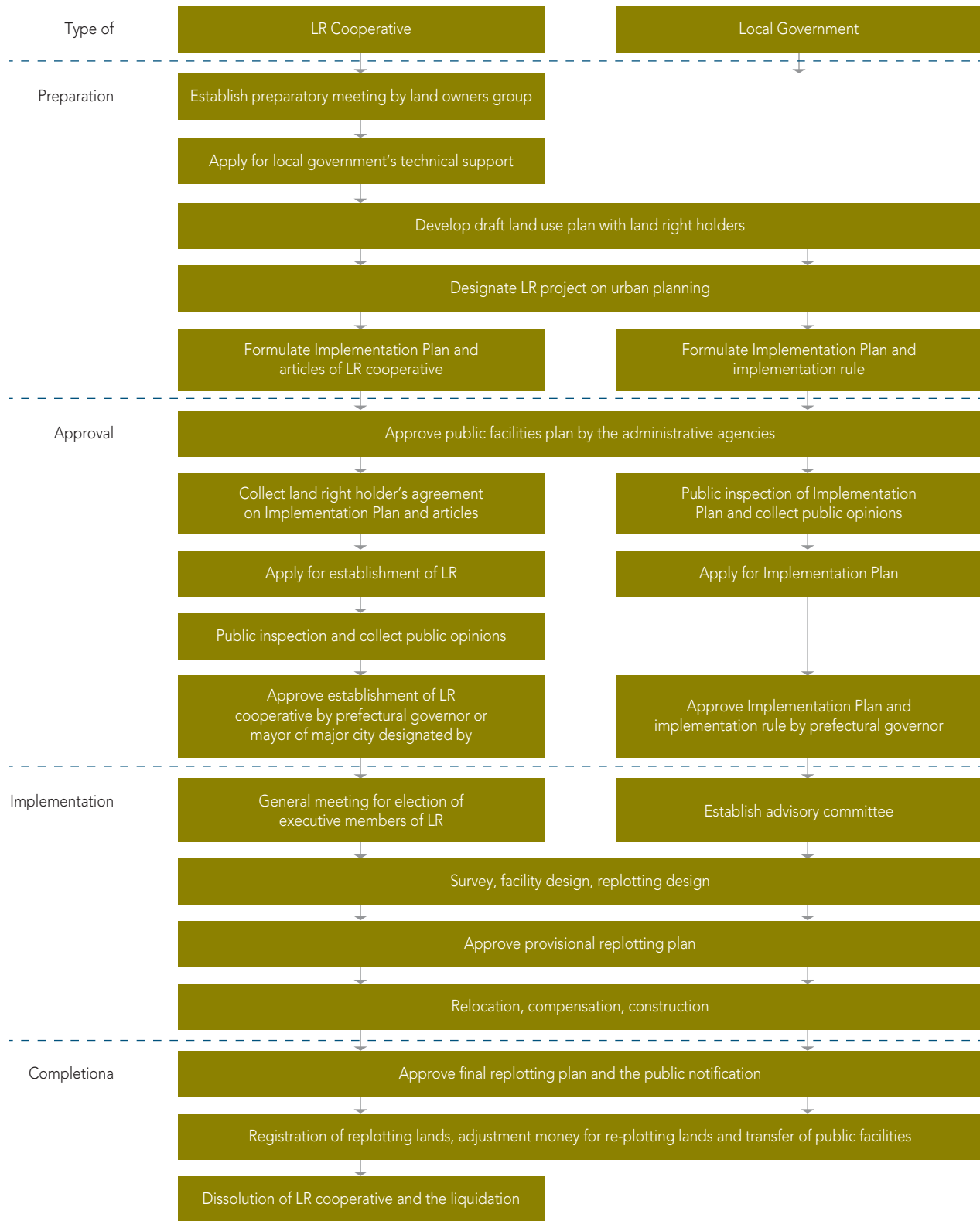
Annex 1: History of LR in Japan *(continued)*

Year	Topics	Explanation
1990s	Struggles of private LR and shifting the purpose of LR	After the collapse of the bubble economy in the early 1990s, private LR projects depending on the sale of reserve lands stagnated. For financial recovery, some counter-measures—such as additional land contribution to increase reserve lands and additional charges—were required of land owners in the project site. In addition, the project plans were revised to reduce cost and local governments increased their subsidy to help LR's financial problems. The purpose of LR was shifted from new town development to urban renovation, such as station area redevelopment, integrated urban development with commercial complex, and small-scale LR for land consolidation in urbanized areas.
2001	Formulation of the LR Management Guideline	The LR Management Guideline was formulated by reorganizing past governmental and ministerial circulars relating to LR. In addition, the guideline presents the governmental policy to utilize LR for urban renovation.
2005	Addition of LR company	Provision of LR company as LR implementer was added into the LR Law in order to promote private investment in LR projects. The LR company is organized by land right holders and a private company (such as developers and construction companies).
2011-	Application of LR to post-earthquake reconstruction	Post-earthquake LR projects are currently being implemented for reconstruction after the Great East Japan Earthquake in 2011.

^a *Adickes Act. Der Gesetzentwurf Betreffend Stadterweiterungen Und Zoneneinteignungen (lex Adickes, 1894). Frankfurt am Main.*

^b The major objectives of the Special Urban Planning Law were: (a) allowing inclusion of lands with buildings into LR; (b) cost allocation to local government; (c) land contribution with 10 percent without the compensation; (d) organizing the Inspection Committee for compensation; and (e) tentative land replotting to allow land use before the registration of replotted lands.

Annex 2: Legal Procedure of LR Project in Japan



Source: Author.

Annex 3: Project Frame of Nagakute Nanbu LR Project^a

(a) Land Classification

Items	Original (Before Project)		Plan (After Project)	
	Area (m ²)	Rate (%)	Area (m ²)	Rate (%)
Public Facility lands				
Road	25,824.49	2.63	194,587.30	19.82
Park	652.87	0.07	30,003.14	3.06
Green	—	—	64,473.71	6.57
Drainage	12,313.23	1.25	22,302.00	2.27
Sub-total	38,790.59	3.95	311,366.15	31.72
Private lands and non- administrative lands				
Private land	825,382.86	84.07	541,346.80	55.13
Non- administrative lands owned by municipality*	38,504.29	3.92	25,801.77	2.63
Sub-total	(A) 863,887.15	87.99	(B) 567,148.57	57.76
Reserve lands	—	—	(R) 103,332.01	10.52
Difference between registration and measurement**	(s) 79,168.99	8.06	—	—
Total	981,846.73	100.00	981,846.73	100.00

Note: * Lands for nursery school and cemetery, which to be obliged with land contribution.

** Difference in area between total of land registration and result of measurement of project boundary.

^a Abstracted from the Implementation Plan, 8th amended in 2012.

(b) Land Contribution

Total Private Land Area (Before Project) (m ²)	Total Private Land Area including Difference (m ²)	Total Private Land Area (After Project)	
		Incl. reserve land (m ²)	Excl. reserve land (m ²)
A	A' = A + s	D = B + R	B
863,887.15	943,056.14	670,480.58	567,148.57

Total Area of Land Contribution			Land Contribution Ratio		
For public facilities land (m ²)	For reserve land (m ²)	Total (m ²)	For public facilities land (%)	For reserve land (%)	Total average (%)
P=A' - D	R	E = P + R	P/A'	R/A'	E/A'
272,575.56	103,332.01	375,907.57	28.90	10.96	39.86

Annex 3: Project Frame of Nagakute Nanbu LR Project (continued)

(c) Reserve Land

Total Land Value			Average Land Price	
Before project (JPY)	After Project (JPY)	Increasing (JPY)	Before Project (JPY/ m ²)	After Project (JPY/ m ²)
$V = A \times a$	$V' = D \times a'$	$\Delta V = V' - V$	a	a'
75,464,528,840	93,062,704,504	17,598,175,664	80,000	138,800

Reserve Land

Maximum area for reserve land (m ²)	Planned reserve land (m ²)	Ratio of planned reserve land (%)
$R_{\max} = \Delta V / a'$	R	R/R_{\max}
126,788.01	103,332.01	81.50

(d) Expenditure

Items	Unit	Amount	Cost (JPY)
Public Facilities			
Arterial roads	m	3,358	974,404,124
Community roads	m	61,793	1,114,521,976
Pedestrian roads	m	2,258	129,202,700
Park and Green	L.S.	1	0
Drainage	L.S.	1	1,645,393,509
Sub-total			3,863,522,309
Relocation and Reconstruction			
Relocation of existing building	building	12	1,621,000,000
Reconstruction of existing utilities	L.S.	1	181,689,034
Sub-total			1,802,689,034
Utility			
Water supply	L.S.	1	650,188,488
Gas supply	L.S.	1	216,083,331
Sub-total			866,271,819
Land reclamation	L.S.	1	6,034,000,000
Miscellaneous	L.S.	1	2,626,862,563
Allocated charge	L.S.	1	1,173,000,000
Survey and design	L.S.	1	2,193,000,000
Compensation	L.S.	1	130,000,000
Loan interest	L.S.	1	175,654,275
Administration	Year	17	1,945,000,000
Total			20,810,000,000

Annex 3: Project Frame of Nagakute Nanbu LR Project (continued)

(e) Revenue

Items	Revenue (JPY)	Remarks
Subsidy		
<i>Central government subsidy</i>	4,324,798,000	
<i>Local government subsidy</i>	2,207,000,000	
<i>Sub-total</i>	6,531,798,000	
Sales of reserve land	13,919,600,000	103,332 m ² x 134,700 JPY/ m ²
Others	358,602,000	
Total	20,810,000,000	



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Managing Urban Expansion: Tokyo Case Study

1. Overview on Tokyo's Urban Expansion

Tokyo, with a population of 38 million (2017) has been the world's largest mega city for the past sixty years in terms of economic scale and population agglomeration. Through Japan's drastic economic and social changes, this enormous city has been performing a difficult balancing act of managing urban growth at the national, prefectural and municipal levels.

Tokyo today consists of 23 special wards, 26 cities and multiple small towns and villages. It is the nation's political and economic core and boasts an abundant supply of Grade-A business office buildings. The metropolitan area furthermore includes the seven surrounding prefectures of Kanagawa, Saitama, and Chiba, with over a dozen large satellite cities, comprising the nation's Capital Region (*Syutoken*).

The city's overall growth has been guided by the National Capital Region Master Plan (NCRMP) of 1956, under which Tokyo obtained special status as a capital and a higher level of support from central government for planning and rebuilding. In Japan, the national government has a dominant power in planning and development to embody unitary management and coordination over the country. Holding inclusive visions in the national development plans (Comprehensive National Development Plans (CNDPs)), the national government draws master plans and enacts special laws, backing them with large financing for the Capital Region. Adapting the nation's umbrella plans to the local context, prefectural and municipal governments devise city plans including arrangement of land use, provision of infrastructure, and incentive systems for private sectors. The region is thereby guided by both top-down strategy of the central government and horizontal coordination among prefecture and municipal governments with the multilayered arrangement.

Under a free-hold land tenure system and relatively limited government intervention in the land market, the growing capital city succeeded in mobilizing private sector interest to invest in railways and housing, and the results can be witnessed in Tokyo's urban spatial structure today. Versatile privately owned and managed railway companies radially extended commuter lines outwards and built residential suburbs along them (e.g. Tokyu Corporation and the Garden City Project, Seibu Railway and Tokorozawa, Keio Corporation and Seiseki Sakuragaoka¹), contributing to forming an urban shape of "fingers".

After WWII, Japan suffered the pressure of mass rural to urban migration. Tokyo regained its population during the immediate post-war period and reached 7 million by 1955, subsequently reaching 10 million only seven years later. It then started to expand especially westwards, inducing haphazard small-scale development and sprawl (Figure 1).

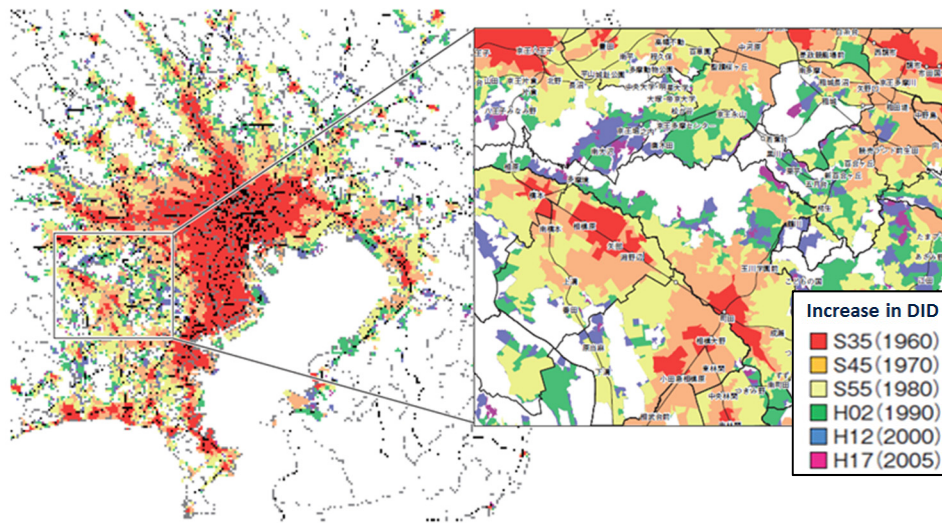
While the central business districts enjoyed economic benefit from urban agglomeration, the fast-growing mega region faced scarcity of affordable housing for middle-income workers and saw a significant increase of long journey commuters from the neighboring cities (Figure 2). To meet the surging demand, the Government supplied mass developable tracts of land (large areas vacated by older industrial units which were then developed for mass housing) to the market by relocating large factories to the new industrial areas in the fringe, mobilizing untapped land, and reclaiming the coastline of Tokyo Bay. This decentralization trend continued until the 1990s, until Japan was faced with a halt in its high economic

¹ Based on Iwamoto, T. et al. (2009). *Post Evaluation on a Collaborative Development in Urban Railway Station Areas and their Surroundings in Tokyo Metropolitan Area*. Journal of the City Planning Institute of Japan, 44-1, 3. https://www.jstage.jst.go.jp/article/journalcpj/44.1/0/44.1_1/_pdf

growth era; the “burst” of the real estate bubble. Land prices in Tokyo dropped sharply, leading to Japan’s decade long economic stagnation (Figure 3).

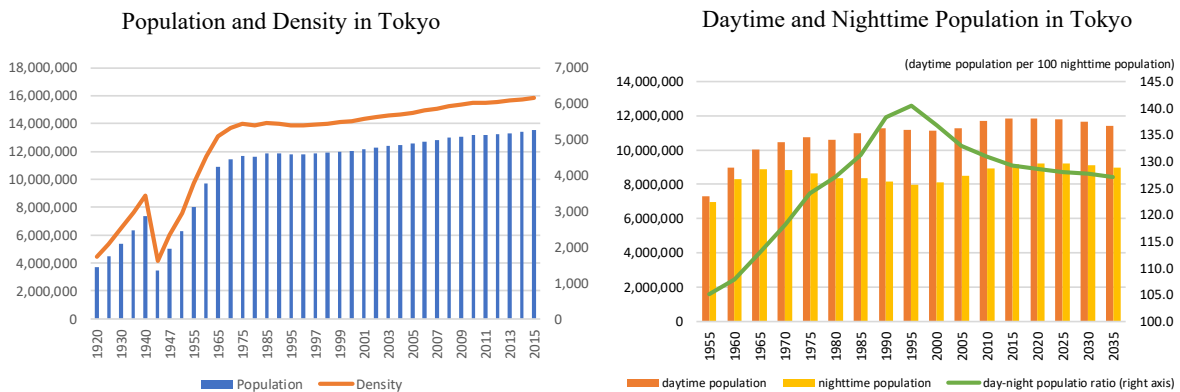
Central Tokyo was more recently transformed through urban revitalization and regeneration. Under deregulation of floor-area-ratio and height control of high-rise buildings (increasing the ratio of a building's total floor area (zoning floor area) to the size of the land (site) area upon which it is built, which then as a result allows for higher buildings to be built), housing and property became much more affordable, and Tokyo saw itself re-densify at the core once again. However, as a mature mega city, Tokyo underwent various urban problems such as traffic congestion, pollution, flooding, lack of access to basic services, degrading living environments, and lack of affordable housing resulting from the long pursuit of pro-growth policy and, more critically, is now struggling with emerging issues caused by the gradually but steadily changing demography and the downward economy across the country.

Figure 1 Expansion of Densely Inhabited Districts (DIDs) in Tokyo Metropolitan Area



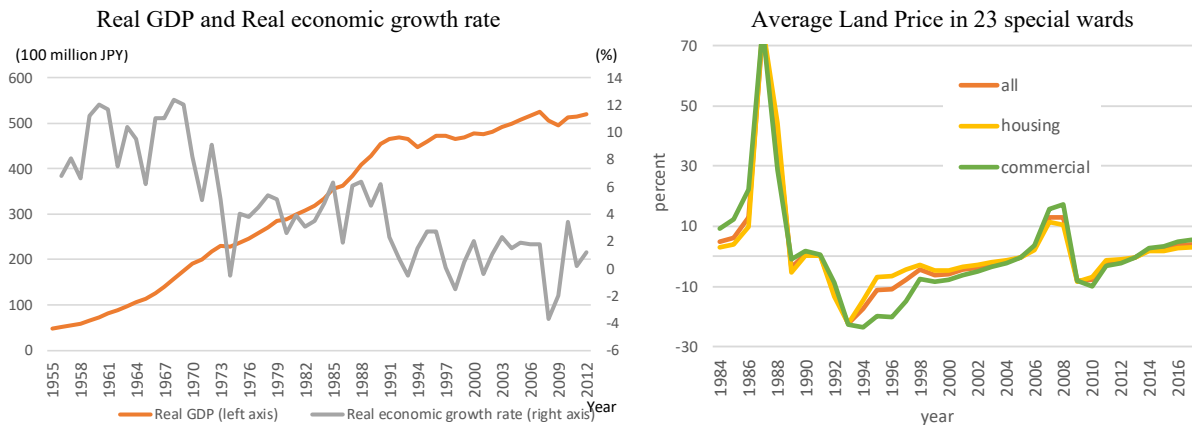
Note: DID is defined as districts with a population density of 4,000 or more inhabitants per square kilometer, and a total population of 5,000 or more. Source: Ministry of Land, Infrastructure, Transport and Tourism.

Figure 2 Changes in Population and Density in Tokyo Metropolitan Area



Source: Author adapted National Accounts Statistics by the Cabinet and Ministry of Land, Infrastructure, Transportation and Tourism, National Census, Metropolitan Statistics by Tokyo Metropolitan Government.

Figure 3 Changes in National GDP Growth and Average Land Price of 23 Wards in Tokyo



Source: Author adapted National Accounts Statistics by the Cabinet and Ministry of Land, Infrastructure, Transportation and Tourism, National Senses, Metropolitan Statistics by Tokyo Metropolitan Government.

2. Policy Alternatives during an era of High Population and Economic Growth: What worked and what didn't work?²

How would a city, faced with the challenges due to high population and economic growth pressures against a backdrop of limited fiscal capacity, land and resources, go about solving the increasing issues from rapid urbanization, traffic congestion, pollution, flooding, lack of access to basic services, degrading living environments, and lack of affordable housing? Japan “explored” various policy alternatives, and some worked, others didn't – each with its respective positive and negative impacts and outcomes.

Policies to Decentralize Employment. If the concentration of jobs in the inner wards of Tokyo is the main cause behind the spatial separation of employment and population in the Tokyo metropolitan area, policies to decentralize employment would be the most rational solution to the city's problems. There was in fact a long tradition of such policies. After the 1923 earthquake, the first major industrial plants were relocated from inner city locations to newly created industrial areas along Tokyo Bay, and this was continued in the post-war reconstruction period, partly using land reclaimed from the Bay.

Decentralization of office activities proceeded more slowly. Only during the 1980s have excessive land prices in central Tokyo spurred the development of secondary office centers throughout the region, many of them waterfront developments around Tokyo Bay. However, a slump in demand for office space followed and retarded the process. The plans for a decentralized National Capital Region conflicted with its stated goal of making Tokyo a ‘global city’ and the related tendency of high-level office functions to concentrate in central Tokyo, and situation today shows that the late change from decentralization to centralization was not effective as envisaged.

Policies to Create New Land. These policies aim at increasing the supply of land by creating new land underground (extensive use of underground space for commercial use, mainly at railway terminal stations and intermodal facilities, done in partnership between public and private sectors), on the water (land reclamation, mostly public-led), or in the air (high-rise buildings, mostly private-led). The most substantial

² Modified by author based on Shapira, P., Masser, I., and Edgington, D. (1994). *Planning for Cities and Regions in Japan*. Liverpool: Liverpool University Press.

land gains are expected from land reclamations from Tokyo Bay. Major projects aimed to provide housing and workplaces were planned on several artificial islands. These projects have one thing in common: because of their high construction costs, their financing schemes work only under the prospect that the land they create can be sold after completion at market prices. So, these projects could not be expected to bring land prices down, even though they may take some pressure from central Tokyo. The effect on commuting time depends on the number of residences that will eventually exist in the new developments.

Policies to Mobilize Untapped Land Supply. The aim of these policies was to make it less attractive for landowners to hold vacant land. The greatest impact was expected from abolishing the tax privilege (all farm land in Urbanization Promotion Areas to retain preferential tax treatment, which was 1-2% of the tax paid on nearby residential land) of farming landowners in suburban areas. If the property tax on suburban agricultural land could be made equal to that on residential land, most farmers would be forced to sell or develop their land. Depending on the amount of supply released, land prices should go down. This would lead to shorter commuting times. However, the new property law which went into effect in 1992, had again failed to solve this problem as it retains the privileges of suburban farmers. The effects of an increase in the tax on capital gains from land sales are difficult to predict. In the case of speculative land transactions, the effect on price formation is likely to be minimal. Increasing city planning tax (Japan has two types of property taxes which are imposed yearly, namely 1) fixed asset tax: tax that is calculated based on the price of fixed assets such as land, a house, and depreciable assets, 1.4% of assessed value of fixed assets and 2) city planning tax: tax to be levied as objective tax to allot for expenses required for city planning projects or land readjustment³ projects, 0.3% of assessed value of fixed assets) would have had a similar effect as the property tax, except that it would also increase the tax load of residential lots. Land Readjustment reduced the amount of residential land, and although the new lots have higher use-value and may carry more dwellings, so commuting times would decrease. Land prices are likely to go up, as improvements carried out by the public sector⁴ through land readjustment projects increases the attractiveness of land and its value.

Policies to Increase Housing Supply. One way to protect households from the financial burden of high land prices and rents is to subsidize housing construction. In the Tokyo Metropolitan Area, there have been extensive housing projects both by the Japan Housing Corporation and by local government. Being in general high-rise developments, these projects have helped to fight urban sprawl. However, as land for these houses had to be bought at market prices, they have not contributed to a reduction on land prices. Because of high land prices, the housing projects of the Japan Housing Corporation had tended to be at distant locations and had thus effectively contributed to the increase in commuting times.

Policies to Subsidize Housing Demand. Besides housing projects, housing subsidies can be given to households in the form of housing loans or allowances. Housing loans from public loan corporations had lower interest rates than private bank loans, and the amount of finance had continued to increase through 1990s. With rising land prices, not only had the number of households finding themselves in debt grown

³ The government pools or assembles the various privately owned land parcels in each area and prepares a land use plan for the overall area including designating spaces for public infrastructure and services such as roads and open spaces. It then implements the plan and provides the necessary trunk infrastructure. At the end of the process, the government returns to each landowner a land parcel proportional to their original parcel but of smaller size (for instance, 60-70 percent of the original land parcel) - except that the new land parcel is of a higher value because it is now serviced urban land. The government retains selected strategic land parcels that it auctions or sells at market rates for cost recovery of its investment in infrastructure and service delivery.

⁴ Infrastructure improvements (such as transport including roads, bridges, and public transport, water supply, sewerage, electricity, gas, etc.), supply of open and green space and its maintenance, and basic public services (public buildings, schools, hospitals, libraries, etc.)

considerably, but the share of their income required for monthly instalments and the duration of repayment had also increased. Housing loans create demand at market price, and hence stimulate land price development. Many large corporations, especially foreign firms, gave housing allowances to employees to make it possible for them to live in Tokyo.

Policies to Subsidize Commuting. Practically all firms subsidize the commuting expenses of their employees through commuting allowances. While it is fair that at least the financial burden of long commuting is taken from commuters, it has the undesirable effect that, when choosing a residence, they consider only travel time. If they had to pay for commuting from the same budget as housing, many households would probably opt for a closer but smaller house. The neo-classical economic concepts of household locational decision making, or the access-space tradeoff model⁵, does not apply in the Japan context. Possible unpopular but necessary policies to reduce long commuting would be to abolish the tax exemption of commuting allowances and raise public transit fares.

Policies to Reduce Commuting Time. The most direct way to reduce long commuting times is to provide faster transport. On existing commuter rail lines this can be achieved through higher train speeds, shorter stops and more frequent trains. In fact, these measures have been extensively applied to produce the impressive efficiency of the public transportation system in Tokyo. Therefore, dramatic further reductions in door-to-door journey times are not likely. The greatest impacts will occur where entirely new lines open land at the periphery of the metropolitan area for commuting. The irony is that such transport improvement, under the conditions of a speculative land market, may contribute to its extension of railway lines. With an upward sloping demand curve, the additional land supply does not help to bring land prices down; instead, through land price increase along the line, it forces many households to move farther out. The benefits of the new line largely go to developers and landowners, while the households, through higher land prices and longer commuting times, are in a worse situation than before.

Policies to Reclaim Transport Costs. These policies were originally discussed to open new channels for financing transport infrastructure in the face of rising construction costs and land prices using the principle of value capture. However, some of these measures also serve to distribute the benefits and burdens of transport improvements in a more equitable way between landowners and land users. If, for instance, landowners along a new rail line are charged a higher property tax in proportion to the increase in price of their property due to the new line, a fairer distribution of benefits would result. Apart from the difficulties of objectively imputing the benefits to individual lots, the problem is that nothing can prevent landowners passing these extra costs on to their tenants or buyers, in which case the value capture measure would contribute to justifying further land price increases. A positive effect would result in the case of speculative land hoarding, as it would make it more expensive to withhold vacant land from the market.

⁵ The neo-classical economic concepts of household locational decision-making can basically be understood as a simple trade-off model between accessibility and space requirements. That is, the size of a property and its accessibility to the city center are inversely proportional; the further the property is from the city center, the larger the property will likely be. Since distance to the city center means more transportation cost, and transportation costs and space requirements are seen to be the main factors influencing household locational decision-making.

3. Key Policy Instruments to Manage Growth: The Structure and Loopholes

Master Plans for the Capital Region

The first urban master plans were drawn around 1940 when housing development started remarkably expanding westwards. The plan envisaged a core area ringed by green areas and surrounded by linked cities, influenced by European ideas, especially Ebenezer Howard's earlier "social city" scheme as "Garden City"⁶. The city leveraged post-war reconstruction to push this vision. The initial reconstruction plan passed for the execution targeted the city population below 5 million while settling 4 million inhabitants in the fringe cities by conducting more than 10,000 hectares for Land Readjustment, new multiple 100- and 80-meter-wide road construction, and 18,000 hectares for green area in the city. However, these were relinquished due in large part to austerity. 90% of original Land Readjustment plan was cut off, only existing roads were slightly expanded without almost no new construction, and all the planned green area was abandoned.

The NCRMP substituted these masterplans. It has been revised five times until now and is still in effect. The first plan designated a 10-kilometer-wide greenbelt, adopting Abercrombie's Greater London Plan. However, it was renounced, facing strong housing demand and active opposition by farmers who wanted to subdivide and sell farmland. Instead, the existing built up area around a 50-kilometer radius from the city center was designated for Suburban Development Area, which were divided into Urbanization Promotion Area (UPA) and Urbanization Control Area (UCA) by 1970. In contrast, the idea of satellite business cities was accepted over a series of the NCRMPs up to the latest 5th plan, attempting to form both highly self-contained but also mutually supportive sub regions to accommodate a diverse range of residents in the suburbs (Suzuki et al, 2015).

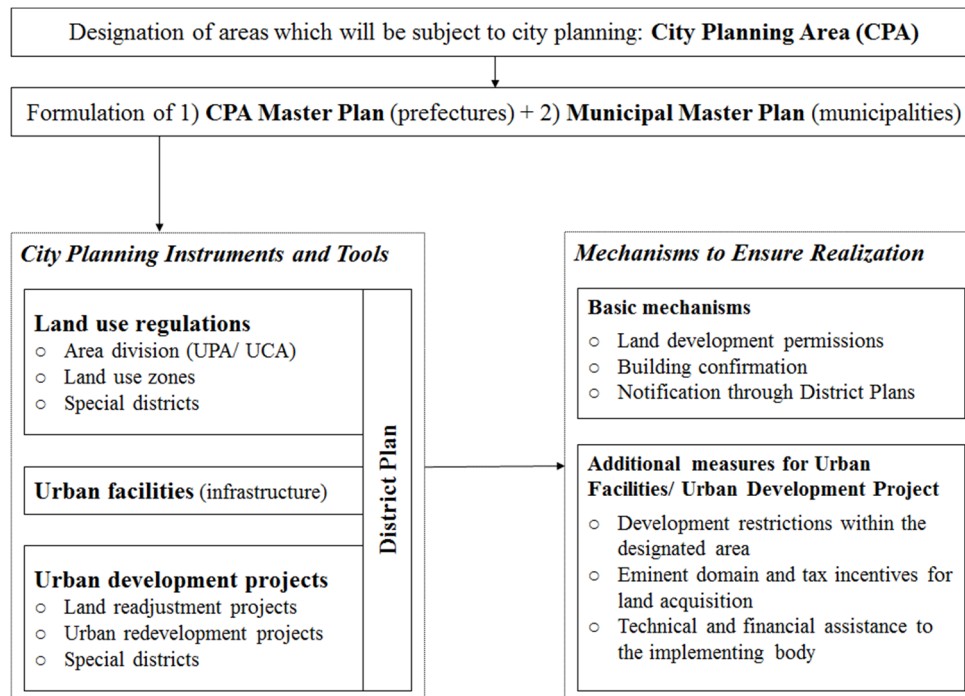
City Planning System (see Figure 4)

The 1968 New City Planning Law is the current active city planning law in Japan, the first major revision of the law since first passed in 1919. The objective of the Law is to promote the sound development and orderly improvement of cities by stipulating the details of city planning and decision procedures. **As urban sprawl became prevalent in the suburbs after the first stipulation of the Law, it was revised in 1968 to deal with issues in urban fringe areas and suburbanization and to primarily focus on controlling excess land conversion from rural to urban.** While under the 1919 Law the ministry at the national level held all planning powers, the 1968 Law enabled considerate delegation of planning powers to prefectural and municipal governments.

Japan's planning system has mainly three types of "city planning instruments and tools" i.e. land use regulations (area division, land use zones, special districts), designation of urban facilities (mechanism for securing land upfront for infrastructure development), and urban development projects (which includes various land conversion mechanisms such as land readjustment).

⁶ Sorensen, A. (2002). *The Making of Urban Japan*. London: Routledge.

Figure 4 Overall Structure of Planning System in Japan



Source: Author.

Area division, or the concept of growth boundary in the Japanese context is precisely the borderline of Urbanization Promotion Area (UPA) and Urbanization Control Area (UCA), which are both within the City Planning Area (CPA).

- **City Planning Area (CPA):** CPA can be designated for land that meets conditions for population, number of employees, that require integrated urban improvement, development and preservation in due consideration of both current and future natural and social conditions. CPA is composed of Urbanization Promotion Area (UPA) and Urbanization Control Area (UCA).
- **Urbanization Promotion Area (UPA):** UPA can be designated for land which will be urbanized within a designated period (approximately 10 years). UPA and UCA classification is primarily based on the following criteria: potential for future urban growth and expansion, urban service coverage, and natural preservation considerations.
- **Urbanization Control Area (UCA):** UCA can be designated for forest area, natural conservation area, agricultural and rural village area, disaster and flood-prone area, and other preservation area. Any construction and urban development activities without permission are restricted within UCA. Land conversion from agricultural to urban is not permitted within UCA under Agricultural Land Law.

Land use zones is an instrument which regulates the use, density and form of buildings in guiding land use, and must be designated in the entire Urbanization Promotion Area (UPA). Based on designated use zone by block, other indicators such as Floor Area Ratio (FAR), Building Coverage Ratio (BCR), and maximum building height are designated for each use zone to control volume of buildings of each block. It is pro-development in nature, that is, development which conforms to these land use zones are in principle permitted by default.

Urban facilities⁷ are one of the most fundamental provisions of Japanese City Planning Law. The location and area of Urban Facilities are stipulated in advance to 1) tightly regulate the building and land development activities of the land plots included within the Urban Facilities area, so that the construction of such facilities in the future can be restricted; and 2) ensure the consistency across land use, projects and facilities, ensuring the effective consultation with relevant agencies and the general public. The first objective is due to the country's experience during the rapid growth period when urbanization happened very rapidly and hence became very costly to secure land in a built-up area for urban facilities.

This is done through a "City Planning Decision" otherwise known as *Toshi Keikaku Kettei*. Effects include, among others:

- Building activities will be restricted in areas where Urban Facilities have been stipulated;
- Once the location of facilities is determined, landowners/ leaseholders can prepare an appropriate development plan in accordance with the facility plan.

Urban development projects schemes enable the public and private sector to carry out necessary development projects to serve public interests through the provision of infrastructure and service delivery. The objectives of having these schemes are to: enhance land use efficiency, consolidate fractioned land ownership and ensure efficient development of roads etc. There are various schemes in place to enable such actions, such as using exchange and conversion of land rights, or acquiring the entire land within the project area. Some projects involve elements such as: development of business, construction of commercial and residential facilities, development of new towns, establishing industrial zones in suburban areas and thereby dispersing population and industries, reinforcing buildings to be resilient, and securing roads and parks for evacuation purposes.

Box 1: Why was Japan not able to contain urban sprawl?⁸

Given that the new planning system had been explicitly designed to prevent further sprawl, why did this continue in the 1970s? The following were ways in which the city planning system was compromised:

- 1) **Over-designation of UPA:** pressure from farmers and farm organizations to include as much land as possible within it, and the Ministry of Construction wanted to ensure that an adequate supply of raw land is available
- 2) **Failure of the proposed land tax reform:** broad loopholes in the new tax which allowed virtually all farm land in UPAs to retain preferential tax treatment (i.e. 1-2% of the tax paid on nearby residential land)
- 3) **Creation of significant loopholes that allowed sprawl development in both the UPA (*mini-kaihatsu*) and UCA (*kison-takuchi*):** mini-kaihatsu is exempted developments of 1,000 m² or less within the UPA from the need to gain development permission (unpaved access roads, serviced neither with sewers nor piped gas, etc.) and kison-takuchi is the result of granting "right to build" in UCA for landowners in specific areas
- 4) **Very loose planning regulations in non-Senbiki "white" areas** (area where UPA/ UCA is unidentified): only half the CPA was divided to UPA and UCA, and are only subject to weak development permits

⁷ Includes transport facilities: roads, urban rail transit systems, car parks, automobile terminals, public space: parks, open spaces, plazas, utilities: water, sewerage, electricity/ gas, waterways: rivers, canals, education and cultural facilities: schools, libraries, research facilities, medical and social welfare facilities: hospitals, day care centers.

⁸ Sorensen, A. (2002). *The Making of Urban Japan*. London: Routledge.

4. Opportunities for the Private Sector: Railway-based Land Development

Railway Development and Urban Expansion

Tokyo’s urban area has grown outwards along railway lines such that the Tokyo metropolitan area, which currently is home to the world’s most extensive railway network. Slow onset of motorization (happening only after 1970s) and poor road network in and around the city spurred rail-based suburbanization. Importantly, the land market is open to private developers under Japan’s free-hold land tenure system and relatively limited government intervention in the land market. Mass demand for suburban housing in the 1950’s at the dawn of Tokyo’s expansion invited a series of disorderly development, undermining the living environment⁹. Nevertheless, some private companies did indeed achieve integrated rail and housing development, grounded on long-term master plans and a vision of a new community development. Naturally, the companies broadened their business fields and initiated what could be the origins of transit oriented development and land value capture long before these concepts were globally acknowledged.

Overview of Railway Development and Incentive Mechanisms for the Private Sector

Multiple railway agencies serve the metropolitan railway network. There are about 48 rail transit providers including public, semiprivate, and private rail agencies, which operate highspeed railways, monorail, new fixed-guideway transit, and classic tram lines across seven prefectures. The railway agencies are classified into three categories based on ownership (Table 1). The first boom of the establishment of railway agencies was between 1910s to 1920s. The national government proceeded with nation-wide railway network construction while the internal metropolitan network is intensified with subway lines developed by a public agency jointly invested by national and metropolitan governments. It should be noted, however, that the public Japan National Railway (JNR) was established in 1949 but fell into bankruptcy in 1987 with the debt of about JPY 17 trillion due in large part to financial inefficiency of the bureaucratic management¹⁰.

Table 1 Classification of Japanese Railway Agencies

Category	Agency	Ownership
Special-purpose enterprise	Japan Railway Construction, Transport, and Technology Agency (former Japan Railway Construction Agency and former JNR settlement Corporation)	National government
	Tokyo Metro (former Teito Rapid Transit Authority)	National and metropolitan governments
	Seven Japan Railway Companies (former Japanese National Railways)	Fully or partially privatized
Private corporation	Private railway corporations	Private
	Third sector	Private, national, metropolitan, and municipal governments
Metropolitan/municipal government	Public transport bureaus	Metropolitan/municipal government

Source: Financing Transit-Oriented Development with Land Values, the World Bank 2015

⁹ “Integrated Station-City Development – the Next Advances of TOD” (Nikken Sekkei Ltd.)

¹⁰ Most operational duty was devolved to seven privatized companies, current Japan Railway Companies while some ownership of rail facilities including guideways of bullet trains and the settlement role remained in a national agency (Japan Railway Construction, Transport, and Technology Agency). See page 104 of Financing Transit-Oriented Development with Land Values, The World Bank, 2015, for the detail of JNR’s privatization.

In post-war reconstruction programs, the national government stressed the importance of seamless commuter rail lines in the metropolitan area. The Ministry of Transportation in 1955 established the Urban Transportation Council that compelled “mutual extension operation” to multiple railway providers scattered throughout the area; this is an operator-blind approach which allows for trains to directly run through the metropolitan subway and commuter lines. For instance, a passenger on a train running on Line A of Operator A will be connected seamlessly to Line B of Operator B, without the need of any transit. Mutual extension operation was introduced in 1962 and is known as a distinctive feature of Japanese metropolitan railway operation. This guidance became the foundation for railway operators for decades. Although the installation requires overcoming many technical difficulties in configuring facilities such as railway width, electric power connection, size of trains, operation security system, cost sharing of salary of staffs, and other charges for using facilities, this has been adopted by most metropolitan subway lines. Thoroughly introducing the interconnected operation at the early stages of railway development had various positive outcomes; mitigating congestion at terminal stations, reinforcing carrying capacity, and ensuring seamless transfers.

To add some context, by this time trams were no longer functioning in the huge city; the carrying capacity were much inferior to subways and the running speed was lowered by urban road traffic congestion. The Council hence decided to eliminate them, and the once total 200-kilometer-long tram lines had been mostly removed by the 1970’s.

JNR also dramatically reinforced the capacity of the commuter lines. After WWII, it spent JPY 680 billion (USD 1.9 billion at the rate in 1965¹¹, USD 6.8 billion at the current rate) over five trunk rail lines following the large-scale railway reform plan stipulated in 1965. This huge amount of investment enabled separated operations on the same tracks (e.g., express / rapid / local trains and passenger / freight trains), making trains longer and faster. Thanks to this large investment, these rail facilities currently operated by JRs still enjoy superiority to private lines in terms of carrying capacity and service frequency.

Replacement of railroad crossing to continuous grade separation is another political option to prevent urban sprawl by effectively utilizing limited spaces. Agreement between Ministry of Construction and Ministry of Transportation in 1969 enabled the provision of subsidies for eliminating at-grade railroad crossing on traffic roads by leveling the guideways or moving it underground. Currently major defrayers of these projects are local governments; they pay 90% of the total cost, the half of which is covered by grant from the central government with earmarked funds from fuel tax and vehicle registration tax and the remaining 10% should be covered by railway companies. It should be noted that these railway companies benefit greatly from improved operational safety and effective use of new spaces generated by the project.

Private railway development was also encouraged by various incentive programs provided by the government. Low interest rate loans and loan-interest subsidies are available to railway providers, in addition to exemption or significant reduction of property tax on rail-related facilities. To promote integrated development of railway and housing, the Special Urban Rail Development Promotion Special Measure Act of 1986 was enacted. It allows railway agencies to collect extra money from their current services and to reserve them in a special fund to support future improvements.

Housing Development Integrated with Railway Development

Most housing development in the Tokyo Metropolitan Area was led by the private sector railway companies. Tokyu Corporation among others developed the country’s largest private-led community

¹¹ Currency exchange rate of Japanese Yen had been fixed as extremely low as USD 1 to JPY 360 after WWII until 1973.

along the Tama Denentoshi-line when it was extended between 1966 and 1984. This symbolic case attempted to embody the garden city concept for wealthy urban residents, and then broadened its concept to an inclusive community development accommodating 620,000 residents over 50 square kilometer area along the extended line. Most of the development area was in the previous Greenbelt between the two cities, Yokohama and Kawasaki, but the Greenbelt designation was revoked subsequently by the two municipalities. The company collectively acquired development sites with dozens of Land Readjustment projects over a 50-year period.

Land Readjustment¹² has been significant to promote integrated development of railway and housing in Japan. It existed in pre-WWII times and began from agricultural land consolidation. After the Agrarian Reform¹³ in 1940's, Land Readjustment was more needed to reorganize increased number of small-land lots in the urban fringe. Lately, this traditional instrument was innovatively integrated with railway development when building Tsukuba Express¹⁴, a large-scale suburban commuter rail connecting between Tokyo and multiple satellite towns. Although the legal arrangement chased this case down much later after the plan of this new commuter line was devised, a special law of Housing-Railway Integration Law in 1989 was implemented only for this project with the provision of zero-interest loans as well as public financial assistance. While other new suburban rail projects suffered from high costs for land acquisition, under this law, the right of way for the new rail line was designated by municipal government, and the area was exceptionally allowed to collectively transfer with the surrounding land lots that governments or public agencies previously acquired.

Various land value capture schemes have also been explored by railway operators¹⁵. By nature, new railway projects require huge capital investment. Although cost recovery should primarily be from fare revenues, full cost recovery can be challenging. Railway companies in Japan have combined multiple sources and schemes, as summarized in Table 2.

Not only had real estate developers and railway agencies formed suburban communities, the public sector such as the Japan Housing Corporation (JHC) also played a major role to respond to the surging housing demand of middle-income workers. The JHC, the predecessor of Urban Regeneration Agency, was established by the central government in 1955 in response to the trend of population concentration into mega cities and increasing nuclear families. As an independent public enterprise, the JHC retained a healthy balance sheet by applying a variety of funding sources such as public and private loans, self-issued bonds, and public investment. By leading multiple Land Readjustment programs, it arranged areas for public amenities including roads, parks, and other mixed use of schools and small retailers together with residential land, avoiding excessive costs. It provided 1.02 million households mostly as a form of housing

¹² Refer to TDLC Knowledge Product, Case Study Land Readjustment in Japan, for details of Land Readjustment mechanism.

¹³ From 1947 to 1950, the central government expropriated agricultural land from great landowners and distributed those land rights to the tenant farmers. Consequently, farm lands were subdivided and the new small-land owners ran for seeking development opportunities, active lobbying for preferential land tax treatment, opposition to the initial plan of small UPA boundary, and claiming "right to build" in UCA.

¹⁴ Refer to Land Readjustment for Transit-oriented Suburbanization and Land Value Capture - The case of Tsukuba Express and the Kashiwanoha Campus Township.

¹⁵ Refer to Financing Transit-Oriented Development with Land Values, the World Bank 2015, for detail of types of land value capture and details of financial arrangement for TOD.

complex and developed 26,000 hectares, of which 6,000 are for residential use, until it was dissolved in 1981.

However, the government failed to provide access railways to these housing estates. They were not connected by commuter lines at least when they opened due to its unprofitability. Hastily, the government established laws and set forth public subsidies for railway construction to provide access to new towns, which did prove effective to an extent.

Table 2 Summary of Land Value Capture Mechanisms in the Tokyo Metropolitan Area

Type	Location	Key stakeholder	Mechanism	Example
Internalization	Urban-suburban	Private railway corporations	Carrying out land readjustment projects along rail lines, receiving the land reserved for property development, and allocating the capital gains from real estate to railways internally (“internalizing” external businesses in private railway companies)	Tokyu Corporation Denentoshi Line
Requirement	Suburban	Private railway corporations	Paying half of the construction costs of new town lines and providing the rights of way at a base price	Hokuso Line
Integration	Suburban	Local governments With developers	Reserving the rights of way for new rail lines and increasing developable parcels for housing sales jointly through land readjustment projects	Tsukuba Express
Petition	Suburban-rural	Local communities with developers	Paying the construction costs of new station facilities, providing the rights of way for free, and creating station plazas and access roads through land readjustment projects	JR Lines
Agreement	Urban-suburban	Developers, landholders, and building owners	Sharing the construction costs or development benefits of new rail projects (and pedestrian access pathways)	Yokohama MM21 Line (and Tokyo Metro)
Auction	Urban	JNR Settlement Corporation with developers	Selling former rail yard sites for private redevelopment around JR’s terminal stations to reduce the former JNR’s debt	JR Shinagawa Station

Source: Financing Transit-Oriented Development with Land Values, the World Bank 2015

5. Post-Bubble and In-Migration to Central Tokyo

As seen in earlier sections, post-war central Tokyo was highly concentrated but living standards were substantially low; chronic traffic congestion, inadequate and dense housing, air pollution, frequent floods and water contamination, and waste management issues were prevalent. People’s desire for a livable environment and affordable housing was a push factor that led to the out-migration of people to the suburbs of Tokyo, known as the “donut phenomenon” from 1960s to 1980s. However, the “burst of the bubble” – a major collapse of the financial market in early 1990s significantly affected the spatial distribution of people, infrastructure and services.

Put simply, people came back to central Tokyo. The Government continued urban regeneration efforts supported by significant deregulation on planning (see paragraphs to follow), but many see it also as a natural result of supply-demand dynamics; low population/ economic growth leading to lower demand for residential and commercial land, resulting in more affordable land and property prices in central Tokyo. Deregulation of floor-area-ratio (FAR) and height control led to an increased supply of high-rise buildings; high-end flats became affordable, welcomed by a new generation equally open to apartments versus the “garden home” dreams of their parents’ generation in the 1970-80s. The introduction of bonus FAR schemes prompted private-sector led high-rise/ high-end redevelopment projects such as Roppongi, Shiodome, Toranomom, and other prime districts in central Tokyo.

However, these deregulations are inconsistent with the government's long desire for polycentric development. Tokyo is now being re-densified. The office supply is spurred under easy monetary policy with increasing money supply and negative interest rate. The forthcoming Tokyo Olympics in 2020 might be somehow boosting the real estate price in the outer urban centers, increasing a potential risk of a small "bubble" in the urban area. Nevertheless, the country is still in the prolonged economic stagnation in the "lost two decades", facing shrinking and aging society, which is causing reductions in tax revenues, inflated public debts, and many other economic difficulties.

Population over 65 years old is increasing rapidly in the fringe of Tokyo, especially between 10 to 50-kilometers away from the center, where there are many new towns built 30-50 years ago. They are left behind from urban regeneration but young people are more attracted to the center. The outer economies have declined with aging occupants and city infrastructure. The auto-dependent residents are losing their mobility for driving safety reasons and left in the long-standing urban facilities that have not applied universal design. Hundreds of thousands of suburban and rural homes are left vacant, and many primary schools are abandoned due to the demographic changes.

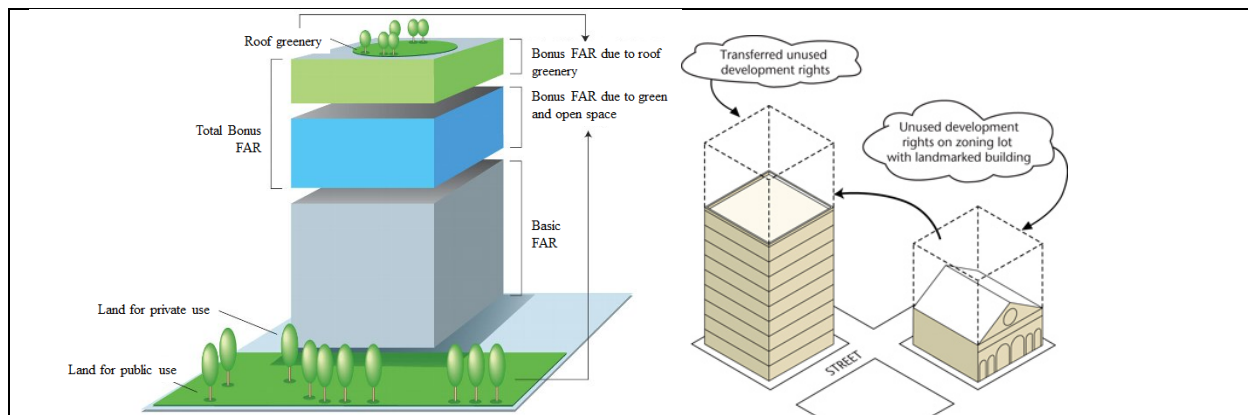
It has been more than 70 years since the opening of the major railway lines. Not only is the maintenance cost increasing but there are large structures requiring immediate rehabilitation; the average of railway bridge and tunnel vintage years is already older than statutory requirements. While some policy makers intend to promote compact city concept, unprofitable rail lines are difficult to be withdrawn as inhabitants along the lines would be left without accessibility.

Social living standards have also changed dramatically. Increasing telecom conferences, remote office-and house-works, and flextime systems adopted by many organizations are reducing congestion on commuter lines. Instead, remarkable growth in e-commerce and home delivery services is bursting the current freight capacity. In the mature economy, people seek highly value-added commodities with the diversified sense of values, being satisfied by sharing them rather than dominating. Policy makers hence are required to support diverse lifestyles across multiple age groups efficiently and equitably through a combination of specific capital projects and operations.

Box 2: Bonus Floor-Area-Ratios (FARs)

Floor Area Ratio (FAR) with the combination with Building Coverage Ratio (BCR) help maintain livable environments through height and volume control of buildings. FAR/ BCR also helps estimate the future population and the scale of activities for non-residential areas upon formulating urban development plans, and infrastructure development is planned in line with this estimated population; lack of control of the FAR/ BCR would imply various issues such as deprivation of the right to sunlight, lack of sufficient infrastructure provision and other challenges associated with overconcentration.

However, City Planning Law and other relevant laws have provisions to relax the base FAR (stipulated through Land Use Zones) under certain circumstances. An example is when there is contribution to public plazas and open space, and pedestrian walkways. Moreover, unused FAR (difference of maximum permitted FAR of the area to the building's actual FAR) can be transferred to another building in the vicinity as air rights transfer. However, this is possible only in certain District Planning areas.



Source: Modified based on <http://www.dng.co.jp/> and <http://www.phila3-0.org/>

The underlying principle of this deregulation is the optimal distribution of costs and benefits based on local conditions. From the Government's perspective, FAR bonuses are given to realize public goods with no cost for the Government. The "Special District Plan for Redevelopment" for major urban redevelopment projects is a common scheme where bonus FARs are given. Significantly higher FARs allowances than specified in the land use zones are granted as a "bonus" in return for private investment in compensating public facilities. Another common example is how the District Plans in the 1990s used FAR bonuses to ensure the provision of wider roads. More recently, the Government modified the guidelines so that FARs can be relaxed up to 1.5 folds for hotels to address the lack of room supply.

6. Implications of Urban Sprawl and Future Prospects

What does all of this mean for Tokyo today, situated in a country facing population decline and the significant need for infrastructure maintenance and renewal? Much of the large-scale infrastructure developed in the post-war period is nearing the end of the life cycle and must be renewed. Tokyo had given in to economic prosperity and consumers' affordability at the cost of major urban sprawl. How will the city manage these assets spread out to the suburbs which are facing major fiscal challenges due decreasing population leading to less defrayers/ payers of these services? What will happen to the self-contained "bed towns" or "new townships" very far from central Tokyo which are now occupied mostly by senior citizens who are over 60 years? These are all important questions that must be answered today - the costs of urban sprawl need to be paid.

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