• Development parameters for rail stations vary by locations based on market demand and socioeconomic conditions.
• After project completion, the railway corporation stays on as an asset manager not only to capture the upfront profits of property development but also to maximize management-related recurring revenues from the long-term business portfolio.

Tokyo’s Diverse and Inclusive LVC Schemes
A 3,500-kilometer extended railway network with about 2,000 stations operated by 48 transit agencies serves Tokyo, the world’s largest metropolis with 37 million inhabitants (map O.2). Tokyo provides one of the best

Map O.2 The Tokyo metropolitan area
a. Polycentric regional structure  b. Urban regeneration special districts

c. Railway network built, operated, and owned by multiple public-private agencies

Source: Based on data from National Land Information, Ministry of Infrastructure, Land, and Transport (MILT), Japan.
experiences in applying development-based LVC to finance railway investments with the revenues from real estate development. Unlike Hong Kong SAR, China’s state leasehold system, Tokyo’s schemes operate under a market freehold system.

Land readjustment is mainly used on urban fringes, and urban redevelopment schemes in built-up areas especially, where property rights are fragmented (boxes O.1 and O.2). Both instruments, however, require either

**Box O.1 Integrated land readjustment for Tsukuba Express**

Under the Housing-Railway Integration Law, municipal governments and housing agencies can designate special land readjustment areas along future railway lines. In this scheme, several landowners within the designed areas give up and reserve percentages of their land for public uses, including the transit facilities or land sales to generate funds for public investments (figure BO.1.1). The economic rationale is that although the original landowners receive smaller land parcels, these parcels would have higher land values thanks to a new station and other local infrastructure and service provision. Railway companies can smoothly acquire the rights of way for their transit investment and promote transit-supportive housing developments through the land readjustment practices.

**Figure BO.1.1 Integrated land readjustment**

![Diagram of Integrated land readjustment for Tsukuba Express](image-url)

Source: Adapted from the Chiba Prefectural Government 2009.
strong community ties or sufficient economic incentives. The consent of all landowners is typically sought, though the laws allow project agencies to implement schemes once they secure the consent of more than two-thirds of landowners.

**Box O.2 Inclusive urban redevelopment scheme, Japan**

Under the Urban Redevelopment Law, landholders, tenants, and developers can create development opportunities in built-up areas, typically where a transit station exists or has newly opened. To capture the potential accessibility benefits conferred by the transit station, the local government first converts zoning codes from single use to mixed use with higher floor area ratios (figure BO.2.1).

**Figure BO.2.1 Inclusive urban redevelopment scheme, Japan (hypothetical)**

![Figure BO.2.1 Inclusive urban redevelopment scheme, Japan (hypothetical)](image)

Source: Adapted from Ministry of Land, Infrastructure, Transport, and Tourism 2013.

**Note:** FAR = floor area ratio.

Before the urban redevelopment project, the site consisted of several small parcels owned by individual landowners and occupied with different tenants. Most houses are one- or two-story structures because each parcel is too small to replace the old building with a taller building, and the landowners do not have the capital or expertise to do so. This urban redevelopment project consists of construction of a taller, higher-quality building on land prepared by assembling small parcels; construction of an underground metro station; and provision of public infrastructure (such as wider roads, a station plaza, and amenities). The national government finances a third of site survey, land assembly, and open space foundation costs, using the national general budget, and half the public infrastructure costs using the roadway special fund. Through this process, the original landholders and building (continued next page)
The world’s largest metropolis has adapted LVC to match the variety of stakeholders, locations, time periods, and scales over the world’s most expansive railway network. Tokyo’s rich transit-oriented experiences offer the following lessons:

- The national government’s master plan leads to polycentric regional development and railway extension strategies, even though multiple public, private, and semi-private entities use different development approaches and LVC techniques in the same metropolitan area. All stakeholders need to share a clear vision and take collective actions.
- Both the land readjustment and urban redevelopment schemes require a consensus building that is often very thorough and time-consuming. And smooth implementation relies on traditional social ties and adequate economic incentives. The power of eminent domain can help practitioners speed land assembly, but careless application could generate long-lasting social tensions and feelings of mistrust.
- Entrepreneurial railway agencies should also acquire expertise not only for conventional system engineering but also for real estate investment.

Table BO.2.1 presents respective stakeholder’s contribution to the land value and their benefit received through the urban redevelopment undertaking.

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Contribution</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landholders (A, B, C, D, E, F &amp; G)</td>
<td>Land parcel for the new building</td>
<td>Joint ownership of land for the new building (sections A, B, C, D, E, F &amp; G) with higher access and better local infrastructure and service provision</td>
</tr>
<tr>
<td>Building owners (a, b, c, d &amp; f)</td>
<td>Old buildings and housing units</td>
<td>Ownership of the new building (sections a, b, c, d &amp; f) with higher access and better local infrastructure and service provision</td>
</tr>
<tr>
<td>Developer</td>
<td>Capital and property development expertise</td>
<td>Profit from section X and from surplus FAR</td>
</tr>
<tr>
<td>Transit agency</td>
<td>Construction of transit station</td>
<td>Transit-supportive environment/increased ridership</td>
</tr>
<tr>
<td>National government</td>
<td>Subsides for land assemblage and road construction</td>
<td>Save road and other public infrastructure construction costs</td>
</tr>
<tr>
<td>Local government</td>
<td>Change in zoning code (from single use to mixed use with higher FAR)</td>
<td>Yields higher property tax revenue; promotes local economic development; builds townships resilient to natural disasters</td>
</tr>
</tbody>
</table>

Note: FAR = floor area ratio.

Table BO.2 Inclusive urban redevelopment scheme, Japan (continued)
town planning, and marketing to set appropriate development parameters, analyze market profiles, offer multiple services, and maximize value increments in their station properties and wider catchment areas. Essentially, railway agencies need to be entitled to keep the long-term ownership and stewardship of properties to generate recurring revenues from both development and service activities around stations.

- The rights of way for a new railway line can be assembled cost-efficiently by railway agencies and local governments through land readjustment projects, especially in areas where local residents are waiting for new railway access. This approach can promote property development along the new line to achieve targeted ridership and fare revenues.

- Major landholders or developers in a designated district can foster land readjustment projects. With their real estate knowledge and resources, they are more likely to invest in local infrastructure, take strong initiatives in planning, and maximize the value of their land around a new station.

- To create high-quality built environments around a station, substantial density bonuses should be provided. Private transit agencies and developers are encouraged to supply social infrastructure and services, maximize synergies, and mitigate redistributive impacts through inclusive urban redevelopment. They can provide human-scale built environments within the superblocks already constructed in many developing countries.

Tokyo’s multiple techniques provide lessons for the rapidly growing cities of developing countries.

**Critical Factors for Success in Developing Countries**

Case studies of cities that have creatively pursued development-based LVC to finance transit and transit-oriented development in both developed and developing countries highlight the unique contexts and challenges of creating and sharing land values for transit financing and transit-oriented development. The insights from these experiences point to policy recommendations and implementation measures that deserve careful consideration at different levels of strategic decisions. They also highlight policy decisions, planning exercises, and project development in applying development-based LVC in developing countries.

**Key Findings**

*Inclusive Value Creation*

The rationale behind development-based LVC is creating and sharing incremental value among the governments, transit agencies, developers, businesses, and residents in and around stations. This obviously differs from tax- or fee-based capturing of “windfalls” from private property owners,
Chapter 4:
Project Approaches to Integrated Station-City Development
駅まち一体開発の事業手法
The preceding chapters have provided the description of integrated station-city town development from the perspectives of historical developments and planning theories. This chapter examines the special measures law for Coordinated Development of Residential Areas and Railways in Metropolitan Areas in relation to the approaches to developing infrastructures and public space, which form the foundation for integrated station-city development. The Act contains provisions concerning Land Readjustment projects, Urban Redevelopment projects and projects integrating railway development and land readjustment projects. This chapter then gives an overview of various development approaches and introduces the examples of New Town developments utilizing the approaches. It also touches on the Urban Renewal Special Area system, one of the urban infrastructure development approaches that take advantage of private-sector resources, adopted in recent times in Japan.

In Japan, there had long been a perception that station squares were something that should accompany major JNR stations that acted as the hub of inter-city transportation, and was unnecessary for local railway stations within cities (Quoted from the “77th Transport Policy Colloquium: The Current Status and Future Direction of Station Squares”). In station square developments at JNR stations around the times just before and after World War II, the government adopted the approach of treating railway land and road land integrally as the site for city planning, and developing it as a land readjustment project. However, the general perception made a gradual shift toward recognizing the need for station squares at local stations (Quoted from the “77th Transport Policy Colloquium: The Current Status and Future Direction of Station Squares”), resulting in the construction of almost 2,000 station squares seen across the nation in today’s Japan.

Developing railways, hubs and communities along railway lines all requires land. Railway development needs land for railway tracks, stations, railways yards, maintenance sites and switching stations. Transport node development needs land for station squares, public car parks, etc. Developing railway hubs and communities alongside railway lines needs land for residential developments, and public land for road / park construction. Railway operators may acquire such land from landowners, but this could present the following issues:

1. Negotiations with numerous right holders could require a substantial amount of time.
2. A massive amount of advance financial investment is required for land acquisition.
3. The cost of infrastructure developments is required following land acquisition. The simple approach of a railway operator acquiring land for the project involves substantial time and costs. For this reason, Japan has employed the following solutions:
   a. Introducing legally binding power to such projects (limiting property rights and exercising eminent domain)
   b. Accommodating the participation of landowners (Land Readjustment projects / Urban Redevelopment projects)
   c. Redistributing the benefits of development (Land Readjustment projects / Urban Redevelopment projects)

Solution I is on the premise of using acquired land for public interest, and is therefore available for developing railways and transport nodes but unsuitable for developing railway hubs and communities alongside railway lines. Japan has recently enacted the special measures law for Coordinated Development of Residential Areas and Railways in Metropolitan Areas or “Housing-Railway Act”, combining I – III above to promote integrated station-city development projects. This chapter describes various development approaches, ranging from those for developing public space to those for integrated station-city development, including the Housing-Railway Act, citing specific examples.
1. Source of fund for creating public space

When there is not enough railway land or when redevelopment for a station square involves the use of land, already in use for other purposes, it becomes necessary to work out a way of securing the land. The approaches such as the Land Readjustment projects and Urban Redevelopment projects can be used to acquire land for developing this kind of space for public use. An existing city area roughly consists of (1) public facilities such as roads, plazas, parks, greenery and rivers, (2) buildings and (3) their lands (building sites). It can therefore be redeveloped in a variety of approaches, including a relatively simple approach of redeveloping just one of these three components, and a more advanced approach of redeveloping all the three components integrally and comprehensively. An example of redeveloping just one of the three components would be a street development project for developing/expanding roads to accommodate public facilities, e.g. developing a City Planning Road under the City Planning project, in contrast, the approach of integrally redeveloping both public facilities and architectural sites is the Land Readjustment project, while the approach of redeveloping public facilities, building sites and buildings is the Urban Redevelopment project.

The figures below illustrate the images of a Land Readjustment project and an Urban Redevelopment project.

The Land Readjustment project develops/improves public facilities such as roads, plazas and rivers to reorganize land boundaries for enhanced use of residential land, in order to establish a sound city structure in an existing city area with underdeveloped urban infrastructures or an area that is expected to undergo city development. In existing city areas, the Land Readjustment approach may be used to relocate public facilities or combine individual parcels of land to form good-quality urban space. In two-dimensional city areas with a heavy concentration of low-rise wooden structures and compromised living environment, the Urban Redevelopment project may be used to integrate small parcels of land into larger units and rebuild fire-resistant communal buildings, while securing land and open space for public facilities such as parks, greenery, plazas and streets. The project is aimed at achieving rational, sound and advanced use of land in city areas and upgrading their urban functions. It is a statutory project under the Urban Renewal Act. A suitable project should be selected from these options according to the characteristics of applicable sites and objectives of the public space to be developed.

This is how land for developing this type of public space is prepared. Alongside the acquisition of land, it is just as important to secure fund for the project. One of the approaches for raising fund for a Land Readjustment project is to group together parcels of land, acquired from landowners, sell part of it as reserve land and use the money for developing public facilities. Land Readjustment projects and Urban Redevelopment projects involve a large number of stakeholders including those with land rights, those with leasehold, surrounding residents and concerned government offices. Coordination among these parties is the most crucial aspect of actualizing such a project.

![Fig. 4-1 Image of a Land Readjustment project](image1)

![Fig. 4-2 Image of an Urban Redevelopment project](image2)
Redistributing development gain

Generally speaking, development benefit refers to (1) shortened travel time through the development of roads, railways and other transport facilities or improvement of the living environment through the development of parks and other lifestyle infrastructures, and (2) increase of land's utility, profitability and practical values resulting from enhanced development potential through the changes of land use regulations concerning the floor area ratio, allocation of land use, etc.

Under Land Readjustment projects and Urban Redevelopment projects, city areas with underdeveloped urban infrastructures can undergo land development / aggregation and the development of public facilities / open space to increase their land values.

Since land owners and building owners work on the premise of maintaining the value of their properties after redevelopment compared to their respective pre-project appraisals, if the total post-redevelopment value exceeds the pre-redevelopment value, the difference can be set aside as reserve land. This type of reserve land or reserve floor is considered to be a development gain that may be redistributed to relevant right holders.

2. The starting point of infrastructure development methods

Land Readjustment projects

This section provides detailed description of the aforementioned Land Readjustment project.

As explained earlier, the Land Readjustment project develops / improves public facilities such as roads, parks and rivers to reorganize land boundaries for enhanced use of residential land, in order to establish a sound city structure in an existing city area with underdeveloped urban infrastructures or an area that is expected to undergo city development. In existing city areas, the Land Readjustment approach may be used to relocate public facilities or combine individual parcels of land to form good-quality urban space.

Under the Land Readjustment project, land owners, etc. in the project area subject to redevelopment offer (contribute) part of their land parcels to establish the site for public use such as roads and parks or reserve land. Some of the collective land may be sold to raise fund for the project. (Offering land to be used for public facilities is called Public Contribution while offering land as the reserve land to be sold is called Reserve Land Contribution.) The total of these two contributions is called Aggregate Contribution).

Fig.4-5 illustrates the image of a Land Readjustment project.

Individual contributors’ land parcels are reorganized (replotted) into better form and shaped to accommodate public facilities such as roads and parks. The replotting provides road access to land parcels that did not previously face a road, making them easier for utilization.

Landowners have to accept a reduction in the size of their residential plots after a Land Readjustment project. However, the development of a City Planning Road, park or other public facilities and the improvement of land plots provide the landowners with residential properties with higher value of use. In principle, current residents would not have to move out of the project area.

Such projects are funded with the money raised from selling reserve land as well as government grant for developing / improving public facilities, offering compensation to households in replotted land and preparing residential land for development.

Fig.4-3 Approach to development gain (1)/ 開発利得の考え方（1）

Fig.4-4 Approach to development gain (2)/ 開発利得の考え方（2）

Fig.4-5 Image of a Land Readjustment project/ 土地区画整理事業 事例イメージ図

Fig.4-6 Image of funding for a Land Readjustment project/ 土地区画整理事業 事業資金イメージ
例の地域整備事業（シドーム）
シドームは、例の事例で示す地域整備事業について
本節で詳しく説明する。

地域調整事業とは、都道府県が整備した
市街地や市街化の予定地を含む地域を健全な市
街化を図るために、道路・公園等の公
共施設を整備・改善し地域の面積を増し、宅
地の利用の観点を図る事業である。既設市街
地においても地域調整事業を活用し、公
共施設の整備や土地の集約化を行うことで
より良い都市空間の形成を図ることができる。

地域調整事業の仕組みは、街並みの内
所有者数を、住宅地を少しずつ提供（減少）し、
道路・公園などの公共用地に充てる一方、減
少された一部の住宅地を売却し事業資金の一部
に充てる（共有地に充てる）、不動産取引の
増加により、住宅の公開価格が大きくなる。よっ
て、購入者として、利用価値が低い宅地
を得ることが可能となる。さらに、住宅の面
積の増加について、基準整備やまちづくりの考
え方に合わせた変更により、宅地の面積が増大
する。また、購入新たな住民が応募される
住民が応募される必要はない。

地域調整事業の目的には、地域の整備と
住宅地の整備が促進され、地域全体の
発展を図り、地域の利便性を向上させ
事業資金については、地域管理部会及び補助
金から構成され、これらの資金を財源に、公共
施設の整備や改善に充て、住宅地の整備が
行われる。

地域調整事業の事業（地块5）
地域調整事業による駅前に地区整備の事業
として、地域調整を実施し、駅前地区は再開発計画
制約により、用途地域、容積率の見直し相当
敷地内の空地整備などを含む観点で、より
大きな敷地の整備を図る。

地域調整事業は、既存の地域の拡張
地とその周辺地域を対象として都市基
盤の整備を進め、都市と地域それぞれの
特性を生かし、地域の整備が進むことを
目的として行われた。

地域調整事業は、周辺地域及びその周辺地
場が整備され、地域の利便性と地域の整備
が促進され、地域全体の発展を図る。

地域調整事業は、地域調整計画に合わせて地域
の整備が有効に図られるよう、地域B・15m
の範囲道路を配備した。また、地域周辺として、
約2,552mの駅前広場の整備が行われている。

地域調整事業は、地域の発展を図る意図
および地域の整備が促進される地域を
地域調整事業の対象として、地域調整の
整備が促進され、地域全体の整備が
行われる。

地域調整事業の事業（地块4）
地域調整事業による駅前に地区整備の事業
として、地域調整を実施し、駅前地区は再開発計画
制約により、用途地域、容積率の見直し相当
敷地内の空地整備などを含む観点で、より
大きな敷地の整備を図る。

地域調整事業は、既存の地域の拡張
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場が整備され、地域の利便性と地域の整備
が促進され、地域全体の発展を図る。

地域調整事業は、地域調整計画に合わせて地域
の整備が有効に図られるよう、地域B・15m
の範囲道路を配備した。また、地域周辺として、
約2,552mの駅前広場の整備が行われている。

地域調整事業の事業（地块5）
地域調整事業による駅前に地区整備の事業
として、地域調整を実施し、駅前地区は再開発計画
制約により、用途地域、容積率の見直し相当
敷地内の空地整備などを含む観点で、より
大きな敷地の整備を図る。

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地とその周辺地域を対象として都市基
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の範囲道路を配備した。また、地域周辺として、
約2,552mの駅前広場の整備が行われている。

地域調整事業の事業（地块4）
地域調整事業による駅前に地区整備の事業
として、地域調整を実施し、駅前地区は再開発計画
制約により、用途地域、容積率の見直し相当
敷地内の空地整備などを含む観点で、より
大きな敷地の整備を図る。

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の整備が有効に図られるよう、地域B・15m
の範囲道路を配備した。また、地域周辺として、
約2,552mの駅前広場の整備が行われている。
### Statutory Redevelopment projects

As explained earlier, the Land Readjustment project deals with two-dimensional development, while the Urban Redevelopment project deals with spatial development. These two programs are simply the same in the sense that right holders contribute their properties to develop an area of public space, with the surplus portion sold off to raise funds for the project. However, while right holders own land in the Land Readjustment project, they own buildings and floor areas within buildings (land + building) in the Urban Redevelopment project.

This section provides more detailed description of the Urban Redevelopment project.

In a broad sense, as stated at the international conference of redevelopment in 1958, "redevelopment" refers to the act of rebuilding or reforming a man-made urban area or buildings, already completed at some point in the past, into a form that suits its usage in the current time. Out of a wide variety of redevelopment projects, those carried out under the Urban Renewal Act with cooperation from individual right holders, are called "statutory redevelopment projects". These combine properties in an area with a heavy concentration of low-rise wooden structures, rebuild them into fire-resistant communal architectures and set aside public facilities and open space such as a park, plaza, greenery and streets in order to achieve rational, sound and advanced land use in a city area and upgrade its urban functions.

The Fig.4-9 shows an image of an Urban Redevelopment project.

### Mechanism of a redevelopment project

A redevelopment project creates space for public facilities by establishing a collective site and undertaking advanced land use. Existing right holders receive floor space of a new redeveloped building to the value equivalent to the value of the property they contributed in principle. Making advanced use of land means extra floor space generated (i.e. reserve floor) may be sold to raise the fund for the project.

A redevelopment project involves the cooperation of three parties, namely "right holders", "reserve floor buyers" and "government". Each right holder has the value of the current land / building assets (existing asset) appraised and receives the right to the floor in a redeveloped building (new asset) in the size that has the value equivalent to that of the existing asset in principle. The right holders who wish to move out of the redevelopment area, may receive the payment of money instead. Here, the Right Conversion approach refers to evaluating the land / building of a right holder, and providing surplus floor space of the equivalent value, with the right holder not suffering any burden of cost. The cost of the project is raised by selling to a third party (developer) surplus floor space (reserve floor) that has been created through advanced use of land in addition to the floor to be provided to right holders under the Right Conversion approach.

Fig.4-10 illustrates the mechanism of a redevelopment project.

A redevelopment project has the following revenue and expenditure items. The project plan is drawn up to ensure that the revenues (+) and the expenditures (-) cancel out each other. Majority of project costs is funded through the sale of reserve floor (reserve floor disposal revenue), and supports the project.
Example of station square development as a redevelopment project

An example of station square development as a redevelopment project is the Class 1 Urban Redevelopment Project on the North Exit side of Nakagawara Station. This 1.2-hectare area is located on the north side of the private railway Kaio Line’s Nakagawara Station, facing the Metropolitan Kamakura-Kaido Road. The area had a mixture of residential homes and retail stores, many of which were aged wooden structures. Before the redevelopment, Nakagawara Station did not have a station square. The roads running along the perimeter were also narrow, creating an urgent need for redevelopment also from the perspective of urban disaster prevention. Due to the station-front location, it had general expectations of becoming the heart of surrounding communities. Against this backdrop, local residents of this area formed a preparation cooperative for a station-front redevelopment project in October 1984, in order to achieve community development and lifestyle improvement for local citizens. All the existing residents of the project site moved to a nearby site to initiate the development of a station square. The station-front redevelopment project has dramatically increased the number of station users and employment in surrounding communities amongst the area, and with the redeveloped building at the core, the area is registering steady growth year after year. The completion of the station square has also provided the residents of the local Sumiyoshi district as well as surrounding communities with lifestyle improvement, enhancing convenience in their access to public transport and daily commodities (referenced from Fuchu City website).

Fig. 4-12 Example of an Urban Redevelopment Project (Class 1 Urban Redevelopment Project on the North Exit side of Nakagawara Station)
Overview of Land Readjustment

Land Readjustment for Joban Shinseki Line (TX) development took place in 17 districts in the abovementioned 13 Focal Zones, covering approx. 3,000 hectares of land in total.

It began upon Land Readjustment approval for the Ina / Yawara district in Ibaraki Prefecture in 1993, and continued along the railway line in preparation for its opening in 2005. Some of the Land Readjustment work is still on-going, indicating that the development of surrounding cities and urban infrastructures have not caught up with railway development.

Remaining challenges

In the TX development, the aforementioned approach of having a separate facility developer and a service operator sought to achieve integral development of communities along the railway line and keep land prices under control. In reality, however, changes of economic situations and the trend of population decline have left many of the developed communities unable to reach their planned population and level of development. While it is possible to complete Land Readjustment in these districts within the next ten years, combined properties are likely to become vacant land with no sale or application of development vision. Even housing complex developments tied in with a large-scale station-front commercial facility, like Otsukamori and Kashiwachō, might not be able to fulfill the original development model centered around railway lines. This is because such developments could become exposed to intensified competition with existing commercial facilities or motorization trend with suburban shopping centers opening along trunk roads, in the current social situation with low expectation of overall consumption expansion.

One future option, in developing communities along suburban railway lines, would be to appeal the sustainability and consumer retention within each station's commercial zone, rather than to perceive urban structures as part of Tokyo and the rest of the metropolitan area. Among communities along TX, Kashiwachō Campus Town, etc. is advocating the next-generation city model highlighting “city,” “natural environment” and “intelligence,” while implementing ambitious initiatives forging partnership among the industrial, academic and government sectors, embracing the concept of Smart City and promoting new lifestyles.

<table>
<thead>
<tr>
<th>Name of prefecture</th>
<th>Focal Zone</th>
<th>Name of station</th>
<th>Name of Land Readjustment</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokyo</td>
<td>Rokuchō</td>
<td>Rokuchō</td>
<td>Rokuchō 4-chome district</td>
<td>69ha</td>
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<td>Saitama</td>
<td>Yashio</td>
<td>Yashio</td>
<td>Southern Yashio west district</td>
<td>93ha</td>
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<td></td>
<td></td>
<td></td>
<td>Southern Yashio central district</td>
<td>72ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Southern Yashio east district</td>
<td>89ha</td>
</tr>
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<td></td>
<td>Misato</td>
<td>Misato</td>
<td>Misato central district</td>
<td>115ha</td>
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<tr>
<td>Chiba</td>
<td>Minami-Nagareyama</td>
<td>Minami-Nagareyama</td>
<td>Main district</td>
<td>65ha</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Nishihara and Kanegaseki district</td>
<td>93ha</td>
</tr>
<tr>
<td></td>
<td>Undo-kōen</td>
<td>Nagareyama-Undo-kōen</td>
<td>Undo-kōen district</td>
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<td></td>
<td>Newly-developed area</td>
<td>Nagareyama newly-developed area</td>
<td>Undo-kōen district</td>
<td>287ha</td>
</tr>
<tr>
<td></td>
<td>Northern Kashiwà central area</td>
<td>Northern Kashiwà central area</td>
<td>Northern Kashiwà central district</td>
<td>279ha</td>
</tr>
<tr>
<td></td>
<td>Northern Kashiwà east area</td>
<td>Northern Kashiwà east area</td>
<td>Northern Kashiwà east district</td>
<td>171ha</td>
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<td>Ibaraki</td>
<td>Moriya</td>
<td>Moriya</td>
<td>Moriya Station district</td>
<td>40ha</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Moriya east district</td>
<td>40ha</td>
</tr>
<tr>
<td></td>
<td>Ina/Yawara</td>
<td>Ina/Yawara</td>
<td>Ina/Yawara hillside district</td>
<td>253ha</td>
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<td>Kiyama</td>
<td>Kiyama</td>
<td>Kiyama district</td>
<td>318ha</td>
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<tr>
<td></td>
<td>Shimana/Fukudatsu</td>
<td>Shimana</td>
<td>Shimana/Fukudatsu district</td>
<td>254ha</td>
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<tr>
<td></td>
<td>Katsuragi</td>
<td>Katsuragi</td>
<td>Katsuragi district</td>
<td>530ha</td>
</tr>
</tbody>
</table>

sum 13 20 17 ca.3,000ha

Fig. 4-20 Land Readjustment project/ 土地区画整理事業

192
Main hub stations
(1) Akishabara Station
Akishabara Station, the railway terminal for TX, used to be known as Tokyo's electric town for its heavy concentration of home appliance discount stores, but has recently emerged as the sales and information base for the Anime contents industry. While it is expected that the TX is eventually extended to Tokyo Station, the service currently terminates at Akishabara Station. The TX station is located underneath the road that runs adjacent to JR Akishabara Station. The area around Akishabara Station was designated as one of Urban Renaissance Emergency Development Area, to be explained later, in 2002. Under the national commitment, private-sector investments have been actively brought in to create an area with distinctive characteristics. The integrated station-front development, dubbed Akishabara Crossfield, features Akishabara Daihiku Building (developed by Daihiku Corporation) and Akishabara DX Building (developed by DXD SPC), with the aim of creating a hub including a station square. The industry-academia collaboration facilities for digital contents has been set up on the site to take advantage of Akishabara's industrial characteristics. As an active collaboration base with Tsukuba University, located at the other terminal of TX, the project is deploying wide-area collaboration between both terminals of the railway line.

(2) Kashiwanoha Campus Town
Kashiwanoha Campus Town, spreading from Kashiwanoha Campus Station, is the area for creating an innovative urban environment under the Kashiwanoha International Campus Town initiative with collaboration between the public (Chiba Prefectural Government, Kashiwa City Council), private (private enterprises and citizens) and academic (University of Tokyo and Chiba University) sectors. Here, UCDC (Urban Design Center Kashiwa-no-ha) is initiating a community development that takes advantage of its proximity to central Tokyo with the opening of TX while incorporating abundant nature that still remains in the area.

The area once flourished as part of "Kogashima", the 100-square-kilometer farm that looked after military horses of the Tokugawa shogunate government, extending across the north-western part of Chiba Prefecture (Funabashi – Nantai). In the Meiji Era, it was designated as a "frontier" under the government's program for counting poverty and managed by a frontier development company headed by Hashimoto Mitsui (Takayoshi) for developing a living environment including schools and shrines. Vast expanses of land remained undivided for many years, as seen in the opening of the Kashiwa Golf Club by Mitsui Fudosan Co., Ltd. in 1961 and the establishment of a U.S. Air Force Kashiwa Communications Base in 1955. City development has made gradual progress since the site's reversion to Japanese administration in 1979.

The availability of large-scale parcels of vacant land, made it relatively easy to apply the replotting approach in urban development under the Joban Shinzen Line vision. The Land Readjustment project for 273 hectares of land began in 2000 according to Kashiwa City's city development plan. Tsukuba Express was launched in 2005, including the opening of Kashiwanoha Campus Station. In 2008, the Chiba Prefectural Government, Kashiwa City Council, the University of Tokyo and Chiba University announced the Kashiwanoha International Campus Town Initiative, attracting Imelight as a next-generation model development.

The project is currently inviting research laboratories in the fields of medicine and cutting-edge sciences to make use of the University of Tokyo's intellectual resources (to be built on the former site of the aforementioned U.S. military communications base), while LaLaport Kashiwanoha by the private enterprise Mitsui Fudosan Co. is offering a bustling of activities. Large-scale residential developments are also underway to integrate and enhance all city functions in close proximity. In addition to environmental performance in engineering aspects, the project is addressing national issues concerning the environment, food supplies, medical care and education in a practical initiative as a next-generation economical city, designed by Future Design Center (FDC).

As described, Kashiwanoha is characterized with the use and replotting of large-scale available land for city development. Having a clearly-defined primary project entity meant that the project was able to incorporate community development. The collaboration of the industrial, government and academic sectors in the development of communities along a new railway line, has facilitated next-generation community development and establishment, as well as the branding of a new city called Kashiwanoha. This approach has shaped the image of community development along TX.