

Lesson from Japanese TOD System

International: TOD? Transit Oriented Development

Japanese: EK? Ensen Kaihatsu (Railway Corridor Development)

Ensen Kaihatsu: Railway Conglomerate

- Residential district development along Railways (EK)
- Demand creation through department store
- University invitation
- Branding of Ensen

EK has longer history than TOD (By Hankyu Railway-Osaka around 1910).



Kobayashi

Ichizou (1853-1957)

Founder of Hankyu Railway

Banker

Creation of Hankyu Railway Demand

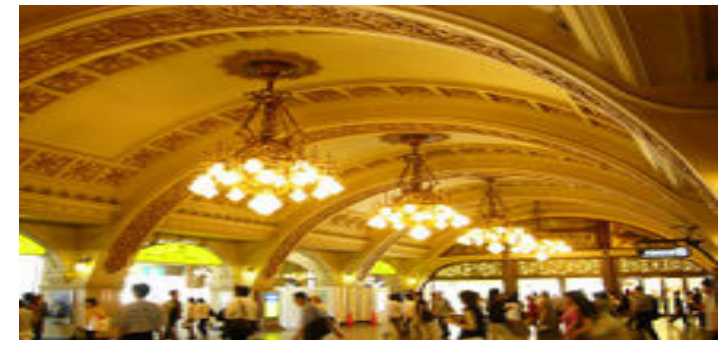
Full utilization of Capacity by Amusement complex

(Opposite direction with main commuter flow in the weekend)



Demand Creation off-peak time by Building Department Stores

(Shopping and Entertainment- New lifestyle of housewife & multi income resources)



Gorgeous main concourse
of Hankyu Umeda Station (1929)

Creating counter flow demand by Inviting Universities along railway development

(Counter flow passengers; Good Images (Branding) of ensen; Consumption by Students)



Kobe Women University



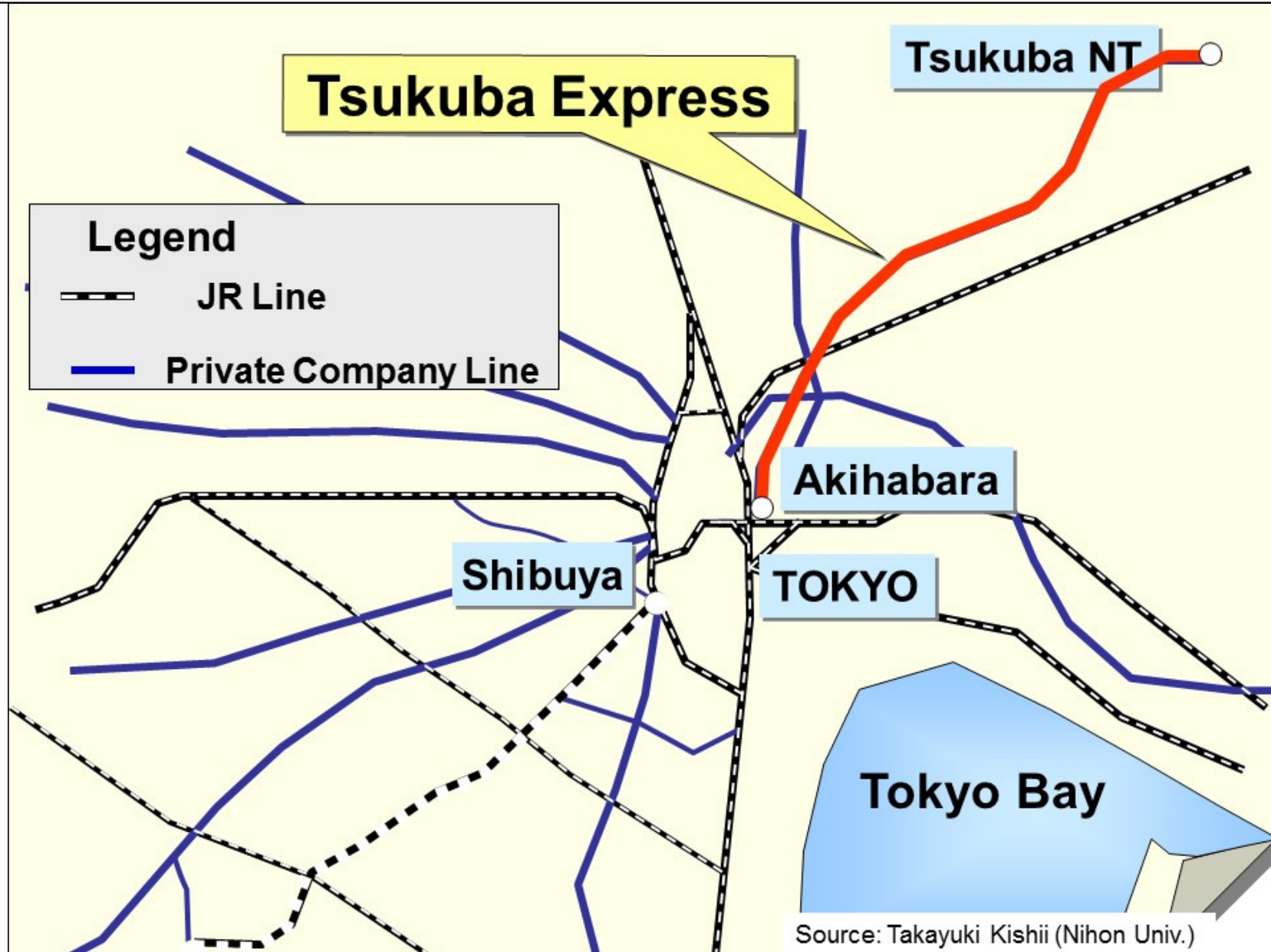
Kansei University

Key Solution: A STRATEGIC INTEGRATION

- Land Use and Transportation System – Joint Railway and Urban Development
- Benefit Distribution and Cost Allocation - Tax, Toll and Investment
- Combination of Land Readjustment and Railway Development



Example : Tsukuba Express



Tsukuba Express

Tsukuba Express

58.3km, 20 stations

Opened in August 24, 2005

Land Readjustment (LR) Projects

18 LR projects by mostly Public Body

3,264ha

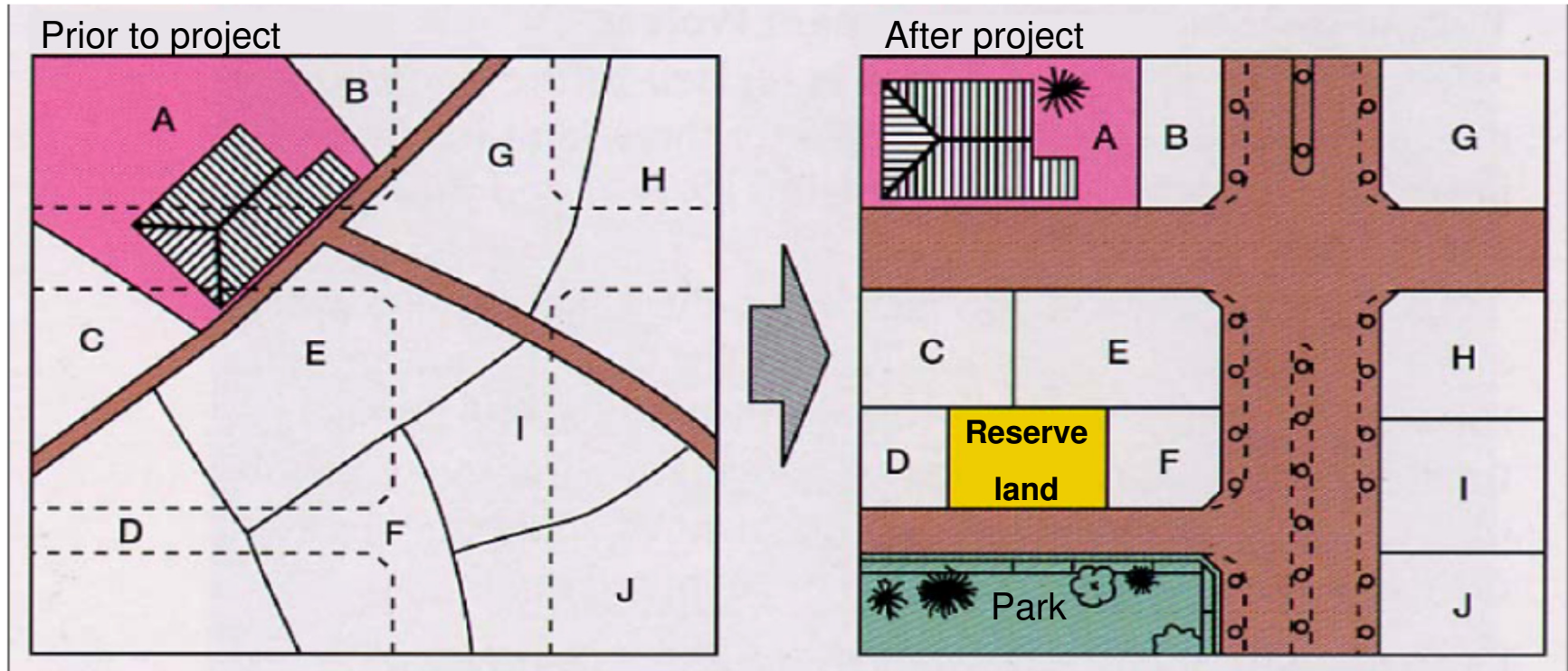
LR Projects along Tsukuba Express



Integrated Land Readjustment-Tsukuba Express

1. **Under the Housing-Railway Integration Law**, municipal governments and housing Agencies can designate special land readjustment areas along future railway lines.
2. 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.
3. The economic rationale: The original landowners receive smaller land parcels but higher land values because of development of a new station and other local infrastructure and service provision.
4. Railway companies can smoothly acquire the rights of way (ROW) for transit investment and promote transit-supportive housing developments through the land readjustment practices.

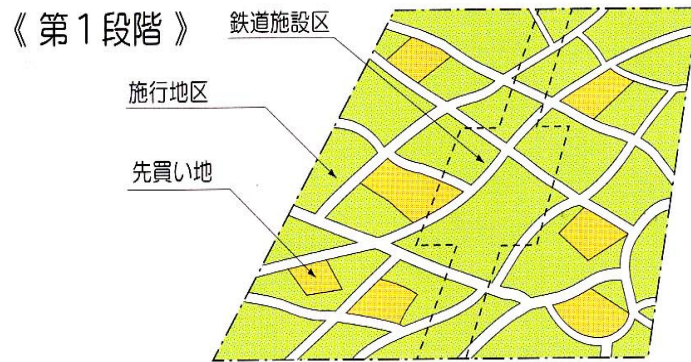
Kukaku-Seiri=Land Readjustment Project



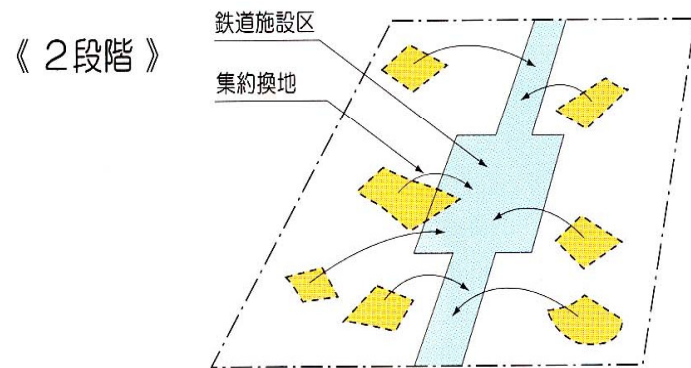
Contribution for Public Land and Reserve Land
Readjustment of Land Rights
Self-Finance by selling Reserve Land

Source: Takayuki Kishii (Nihon Univ.)

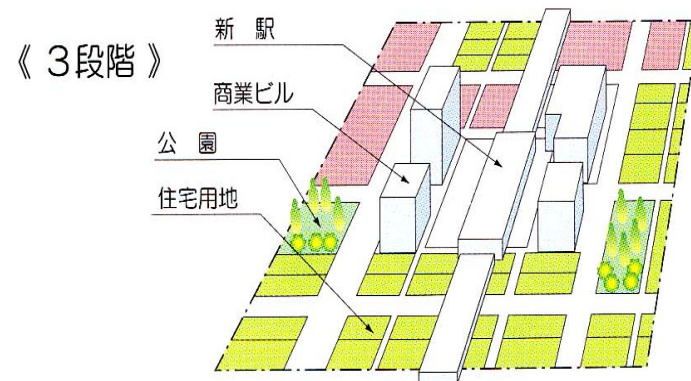
Land Readjustment Stages



Stage 1: Acquisition of land by request, for Railroads



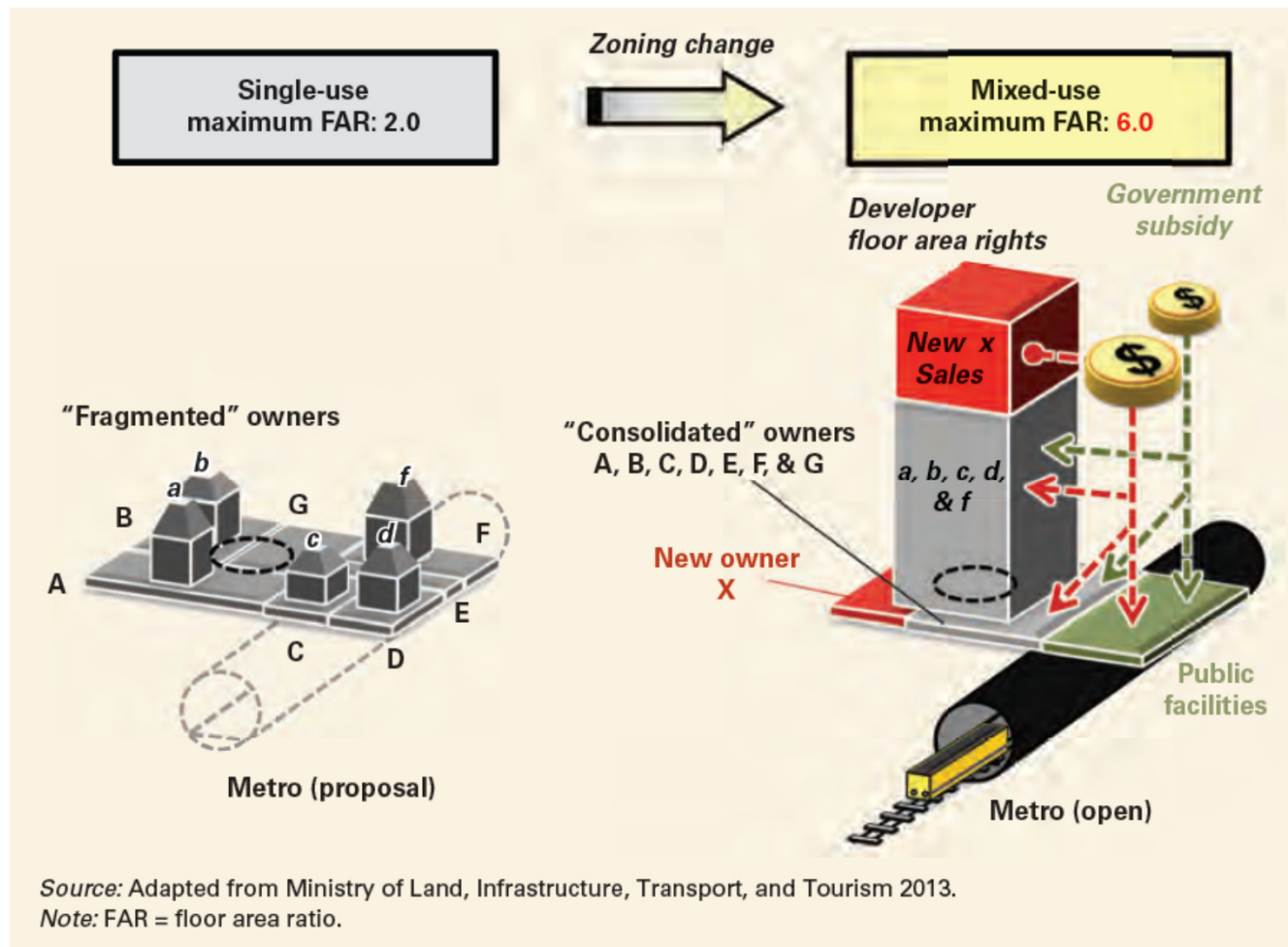
Stage 2: Re-plotting to the planned Railroad



Stage 3: New Towns with the Railway

Inclusive Urban Redevelopment Scheme in Japan

Under the Urban Redevelopment Law, Land Holders, Tenants and Developers can create development opportunities in Built-up Areas, typically where transit station exists or has newly opened. To capture the potential accessibility benefits conferred by the transit station, the local government first convert zoning codes from single use to mixed use with higher floor area ratios (FAR)



Source: Hiroaki Suzuki et al, 2014

Stakeholder Contribution and Benefits

Stakeholder	Contribution	Benefit
Landholders (A,B,C,D,E,F &G)	Land parcel for the new building	Joint ownership of land for the new building (Sections A,B,C,D,E,F and G) with higher access and better local infrastructure and service provision
Building owners (a,b,c,d & f)	Old building and housing units	Joint ownership of land for the new building (Sections a,b,c,d and f) with higher access and better local infrastructure and service provision
Developer	Capital and property development expertise	Profit from station X and from surplus FAR
Transit Agency	Construction of Transit Station	Transit-supportive environment/increase ridership
National Government	Subsidies for land assemblage and road construction	Save road and other public infrastructure construction cost
Local Government	Change in zoning code (from single use to mixed use with high Floor Area Ratio)	Yield higher property tax revenue, promotes local economic development; build townships resilient to natural disasters

Source: Hiroaki Suzuki et al, 2014

Kashiwanoha Station - Tsukuba Express



Pedestrian & Parking Facilities at Kashiwanoha station



Life Museum and Smart City at Kashiwanoha station

