

Key issues for Urban Railway in Asian mega-cities

1. Capacity of Urban Railway

- BRT and LRT are only for feeder line(Lack of capacity like Manila MRT3)
- Hierarchy railway network like road network.

2. Fare level of railway (ex. Bangkok, Japan)

- Difference from Bus and Para-transit ▪ ▪ ▪ generalized cost
- Fare increase according to inflation rate
- 1st class vehicle to keep high income passengers

3. TOD (Transit Oriented Development) : for Better Urban Structure

: for Future Profitability of Railway

4. PPP (Public Private Partnership)

- Lessons from the many failure projects of urban railway in Asia
- Risk of urban development

TOD (Transit Oriented Development)

Urban development along railway

Purpose of TOD ; for desirable urban structure
; for better environment; high modal share of railway
; for value capture
; for land acquisition of railway

TOD is key element of PPP

Down town

; around the central station and ² the stations along the circular line

- Business district
- Commercial area

Suburban area

; around major stations approximately 5 km interval

- Sub center; shopping center, office area, hospital, etc.
- Residential area

; around other local stations

- Residential area and shops

Risk of Urban Development Project for TOD

- The value capture for railway project is important.
- However the risk of urban development project has to be considered.
- Long term pay-back period of large scale urban development projects
 - The profit of urban development cannot cover the railway deficit in short term.
- Therefore the subsidy and cross subsidy is essential for urban railway.

Institutional Reform for TOD

- ① **Coordination system between railway and urban development**
 - Related Ministries and Organizations
- ② **Improvement of city planning system**
 - Institution for planning : planning procedure,
land-use regulation,
Urban infrastructure, etc.
 - Institution for project : Land readjustment scheme,
Urban renewal Scheme
Incentives for developer, investor,
other stake holders, etc.
- ③ **Land acquisition system**
 - land registration system
 - Land appraisal system
 - Land price evaluation and publication
 - Approved system for the licensed real estate appraisers
and evaluation method of land price
 - Land acquisition system