What do we learn from Tokyo Experiences
Urban Railway System

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Main Activities (June 19-21, 2017)

1. **Greater Tokyo Rail Network Development,**
2. **Direct Train Services : "Mutual through train operation",**

3. **TOD** : **"Transit Oriented Development"**, **Rail to City,**
4. **LVC** : **"Land Development Value Capture"**, **Self- Finance**

Questions) <u>A. Project Development Issues;</u>

  New line (Planning- Implementation- O&M – Monitoring)

  Existing lines (rail-elevation, electrification, Double track installation, Speed-up, Convenient service such as direct train operation, information ser vice, etc.)

B. Capacity Building/ Institutional Issues ?

  ➔ What's the fundamental Issues to trigger/overcome?

Creating a World Class
Urban Rail Transport System
in developing countries
Why - What - How ?

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The challenge

A developed country is not a place where **the poor** have cars. It's where **the rich** use public transport.

Enrique Penalosa, Mayor of Bogotá, Colombia

- In cities like Singapore, Hong Kong, London, Paris, 60-80% of the trips are made by **Rail** and Bus trans port

- We can only expect people to **leave their car at home** if a world-class transportation system is in place

A better public transport !   A better city !
A better life, a better business !

Why – High Quality Urban Rail Transport ?

Towards attractive public transport in DMCs

What does the passenger expect from public transport?

- Fast
- Reliable
- Frequent
- Comfortable
- Attractive

- Integrated
- Affordable fares
- Appropriate information
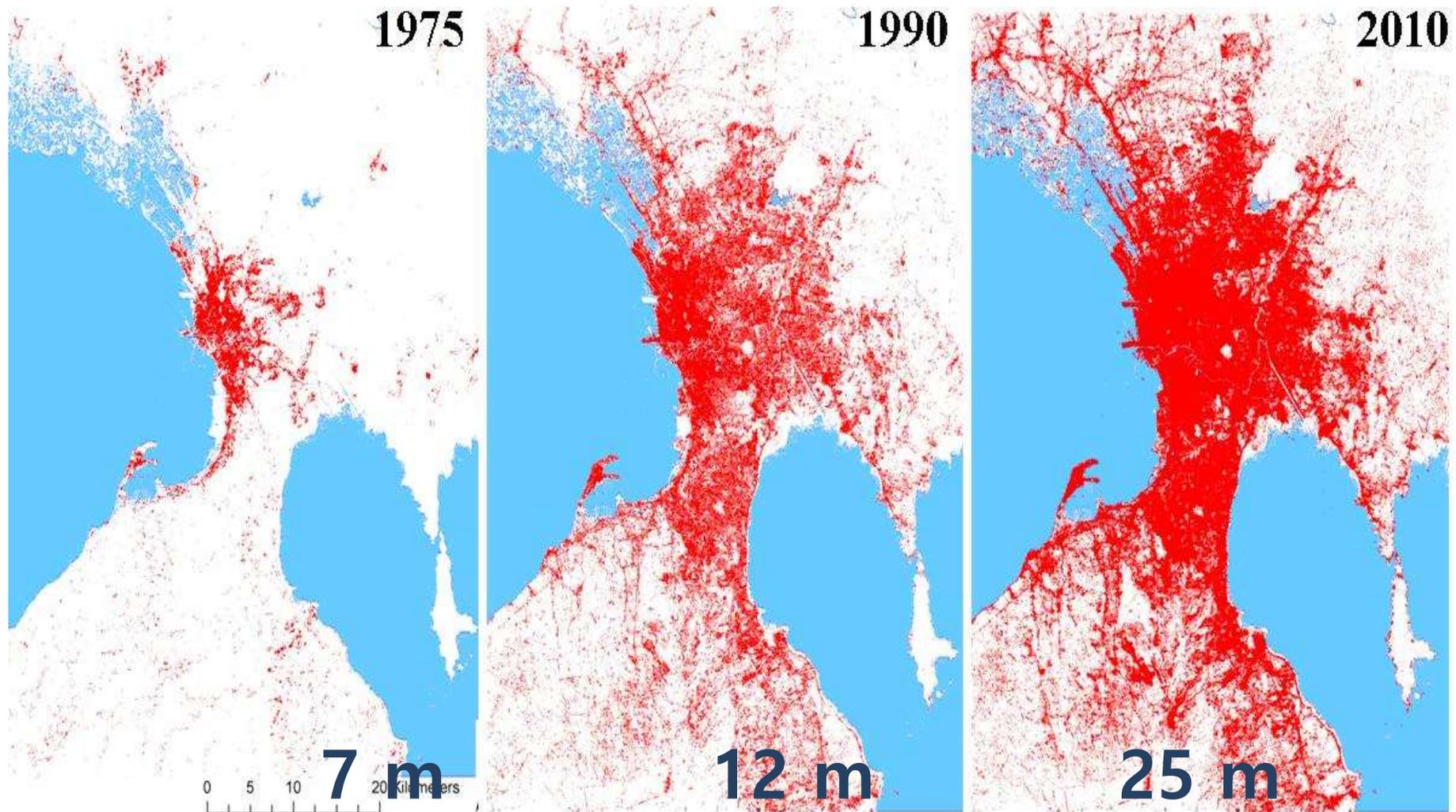- Simple to understand and use
- Safe & secure

Nowadays this quality issues are not met in many cities

How to get a World Class RAIL Transport System in place ?

Mega-Trend
(Developing country, Ex: Phil)

(1)

Urbanization

Increase in Income

Motorization

De-Quality of LIFE

(Air/Security/Commuting time)

Urban Sprawl: Greater-Manila

1975 — 7 m

1990 — 12 m

2010 — 25 m

Ref : earthzine.org/ Figure shows urban growth of Manila, Philippines

How to get a World Class RAIL Transport System in place ?

Vehicle Increase Trend in MM

Table 12 Motor vehicle registration (NCR)

Vehicle Type	Year					
	1980	1985	1990	1995	2000	2005
Private	378,324	402,291	623,498	928,381	1,103,495	1,367,469
Public						
Taxis	10,125	5,406	1,715	21,702	54,054	31,636
Cars	1,461	13	8,150	5,601	0	0
Utility vehicles	27,202	31,235	27,659	53,362	56,484	55,067
Trucks	5,554	2,651	2,532	3,639	6,657	6,270
Buses	3,578	3,718	4,329	7,824	11,287	6,205
Motorcycles	4,801	123	16,418	34,478	54,058	67,098
Trailers	3,243	413	477	705	1,141	1,514
Subtotal	55,964	43,559	61,280	127,311	183,681	167,790
Total	434,288	445,850	684,778	1,055,692	1,255,140	1,535,259

Private Car Dominant
because of
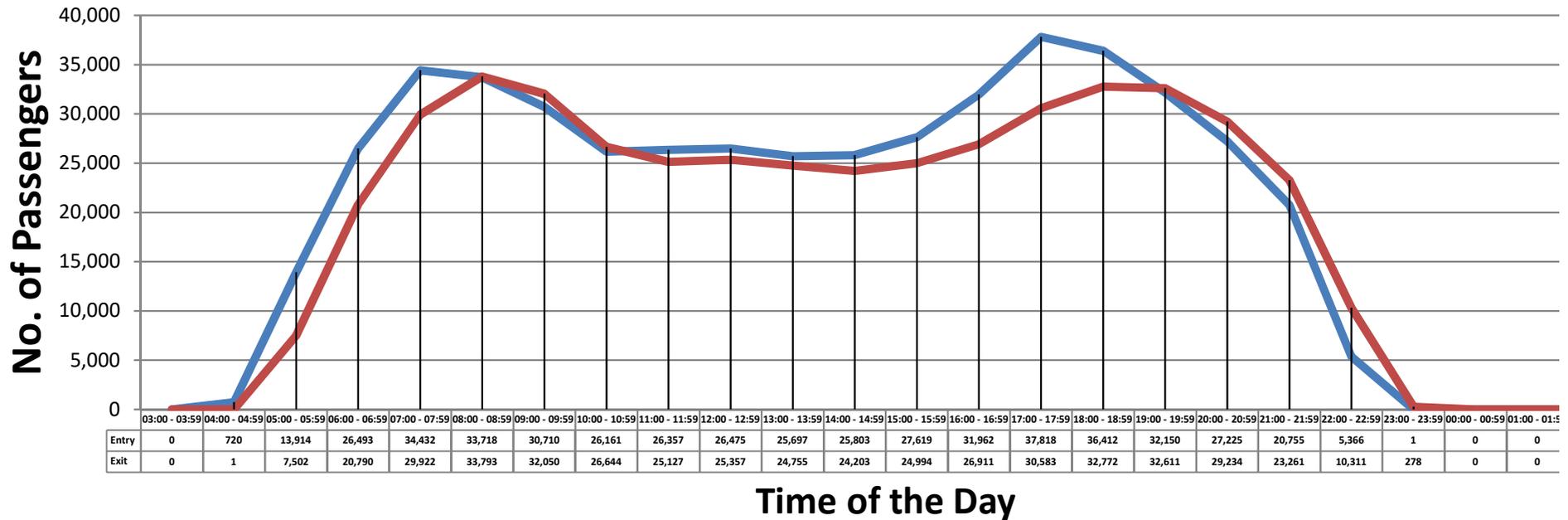Lack of Public Trans. Service ,
Heading to Trans. Disaster
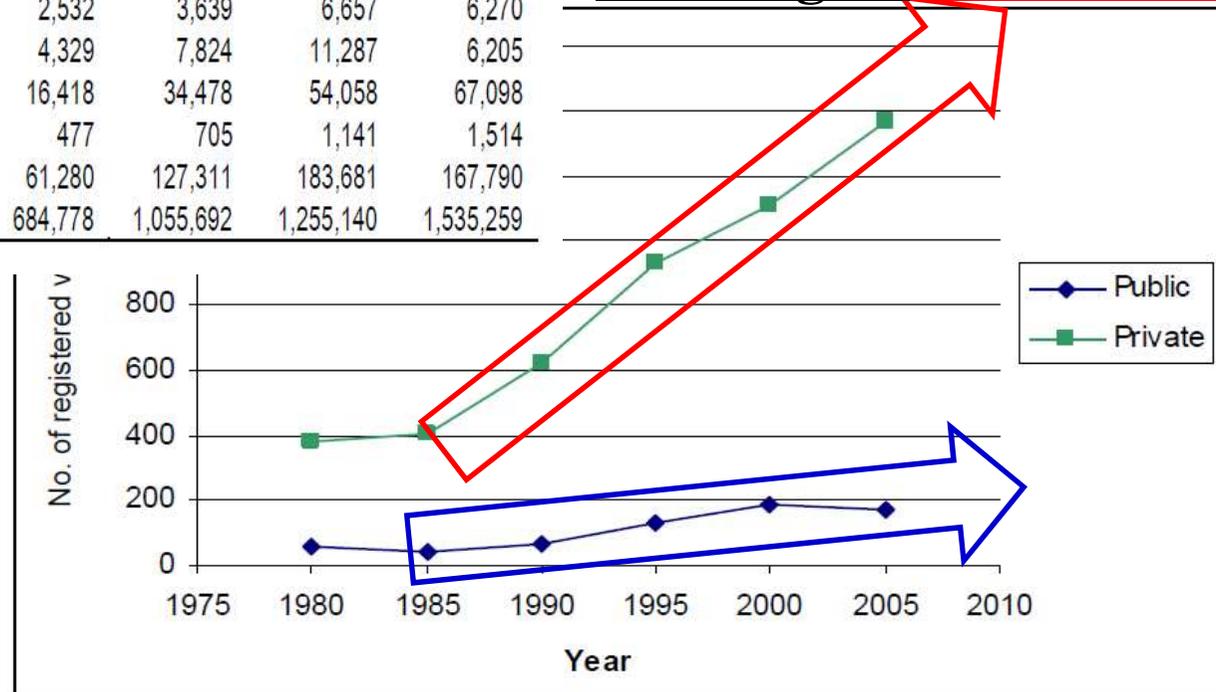
Number of private and public registered vehicles in Metro Manila

Proceedings of the Eastern Asia Society for Transportation Studies, Vol.6, 2007
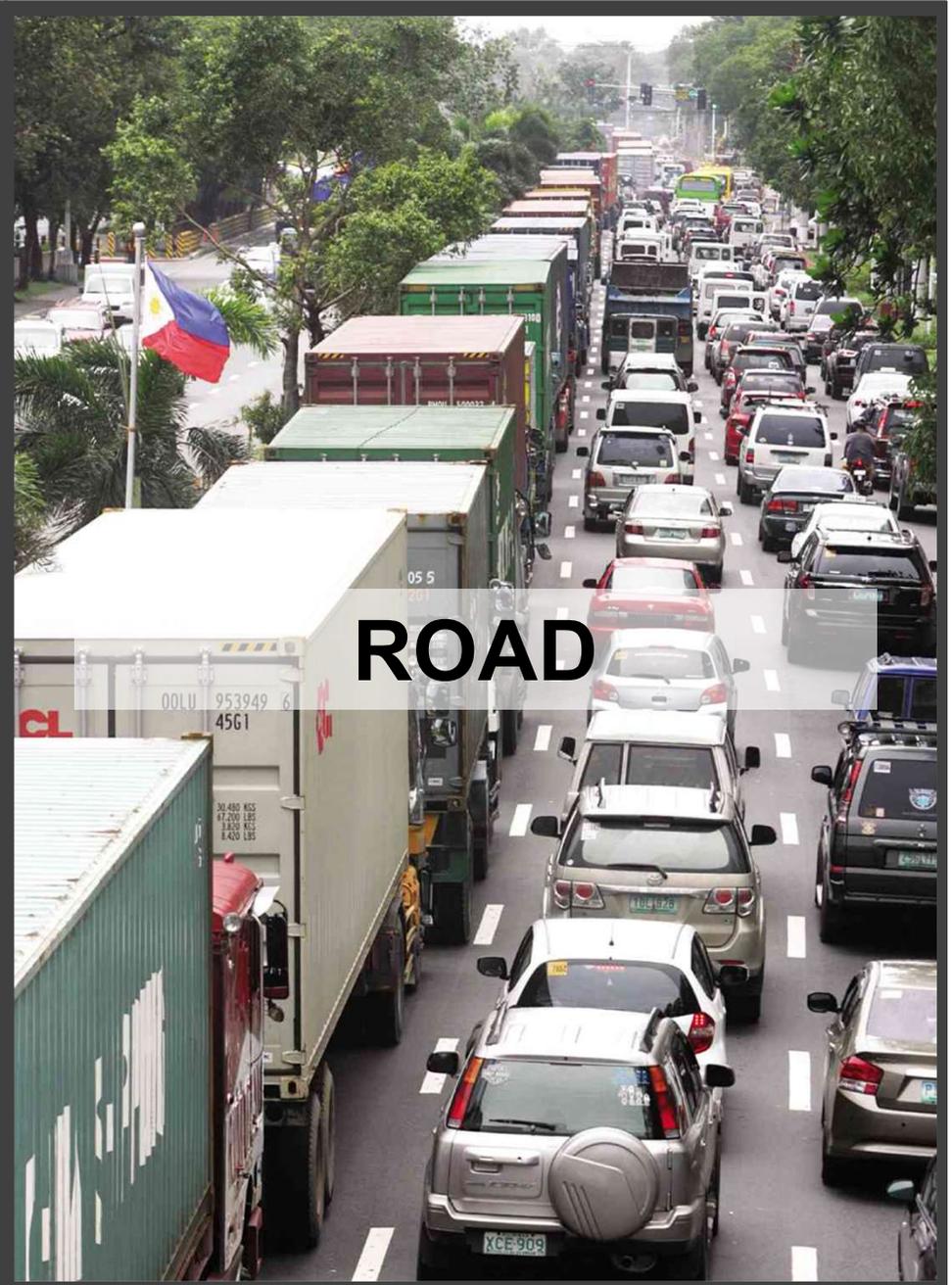
MRT 3 Situation
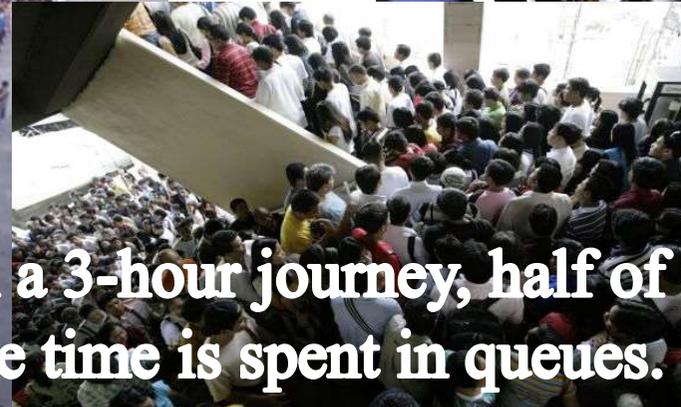
In a 3-hour journey, half of the time is spent in queues.

Average Number of Passengers on the MRT-3 Per Hour

No. of Passengers (y-axis, 0 to 40,000)

Time of the Day (x-axis)

	03:00 - 03:59	04:00 - 04:59	05:00 - 05:59	06:00 - 06:59	07:00 - 07:59	08:00 - 08:59	09:00 - 09:59	10:00 - 10:59	11:00 - 11:59	12:00 - 12:59	13:00 - 13:59	14:00 - 14:59	15:00 - 15:59	16:00 - 16:59	17:00 - 17:59	18:00 - 18:59	19:00 - 19:59	20:00 - 20:59	21:00 - 21:59	22:00 - 22:59	23:00 - 23:59	00:00 - 00:59	01:00 - 01:5
Entry	0	720	13,914	26,493	34,432	33,718	30,710	26,161	26,357	26,475	25,697	25,803	27,619	31,962	37,818	36,412	32,150	27,225	20,755	5,366	1	0	0
Exit	0	1	7,502	20,790	29,922	33,793	32,050	26,644	25,127	25,357	24,755	24,203	24,994	26,911	30,583	32,772	32,611	29,234	23,261	10,311	278	0	0

How to get a World Class RAIL Transport System in place ?

Arteriosclerosis

PORT

AIRPORT

ROAD

10

Main Challenges, ADB

1. Poor quality of the network,
2. Poor intermodal integration,
3. Weak sector governance and institutional capacity,
4. Lack of quality urban transport systems, and
5. Limited private investment in transp. infra.

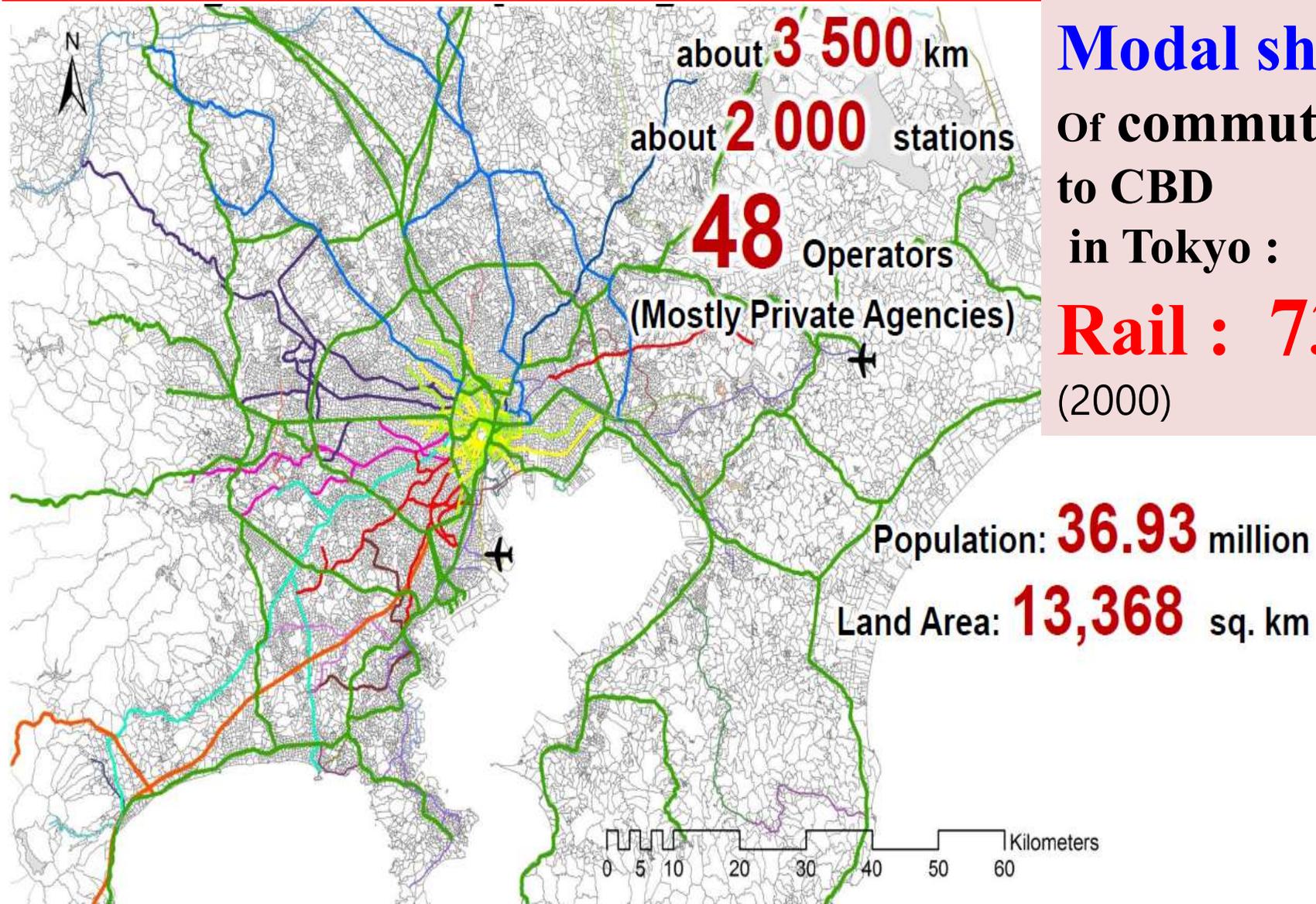(Need Action : keys to strengthening the transport sector.)
1. Improving sustainable financing, supporting infrastructure development and maintenance activities,
2. Contributing to governance reforms (such as procurement, financial management, and quality control), and
3. Supporting private sector participation

Rail Transport Network

(2)

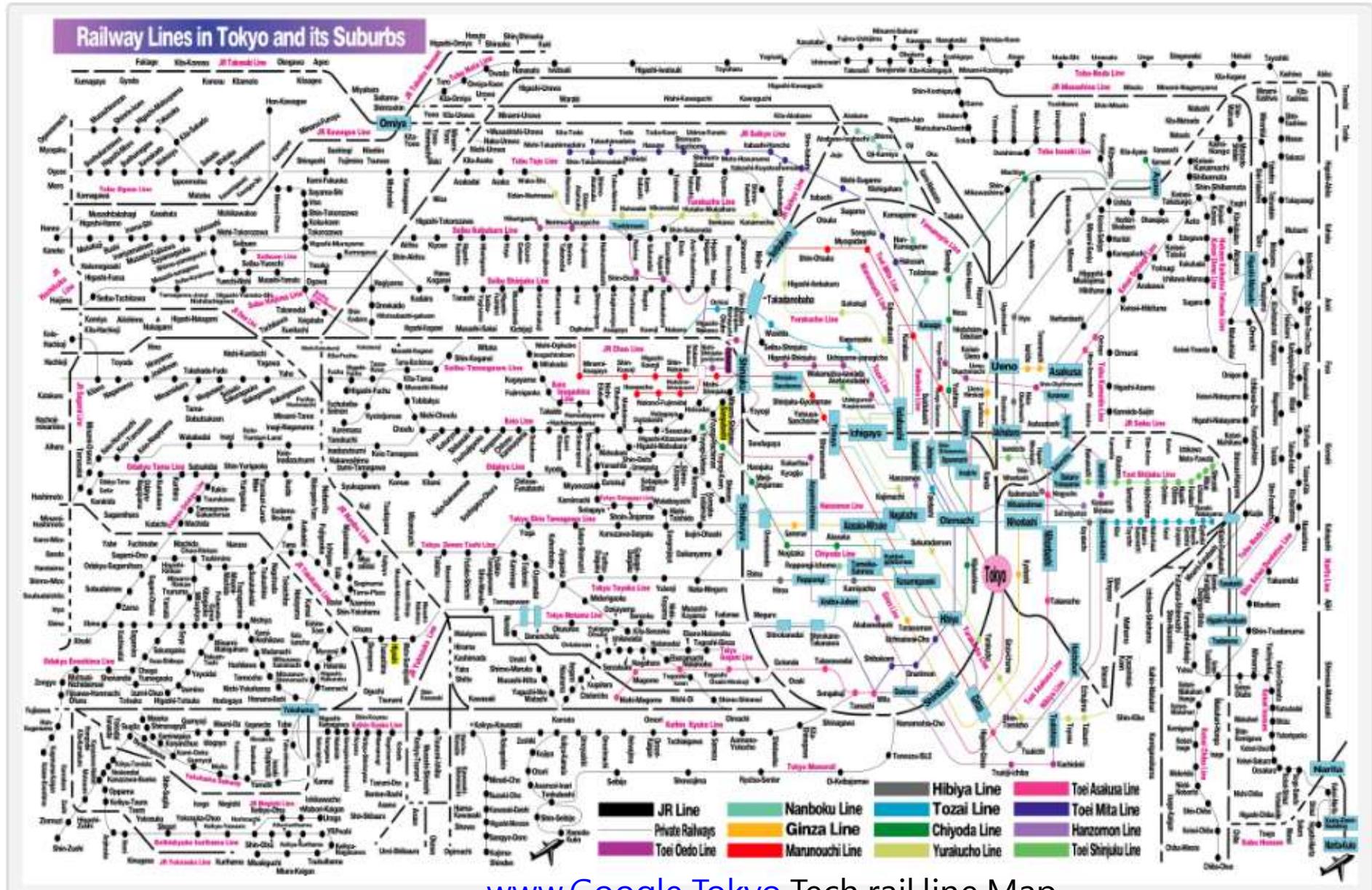# -Tokyo Experience

-Urban Rail
-Sub-urban Rail

Urban Rail Map in Greater Tokyo

about **3 500** km

about **2 000** stations

48 Operators

(Mostly Private Agencies)

Modal share

Of **commuters** to CBD in Tokyo :

Rail : 73%

(2000)

Population: **36.93** million

Land Area: **13,368** sq. km

Kilometers

0 5 10   20   30   40   50   60

Source: Based on data from National Land Information, Ministry of Infrastructure, Land, and Transport (MILT), Japan.

How to get a World Class RAIL Transport System in place ?

Urban Rail Map in Greater Tokyo

Railway Lines in Tokyo and its Suburbs

JR Line	Nanboku Line	Hibiya Line	Toei Asakusa Line
Private Railways	Ginza Line	Tozai Line	Toei Mita Line
Toei Oedo Line	Marunouchi Line	Chiyoda Line	Hanzomon Line
		Yurakucho Line	Toei Shinjuku Line

www.Google.Tokyo.Tech.rail.line.Map

How to get a World Class RAIL Transport System in place ?

Rail Network Map in Greater Tokyo

Population & Time Distance

Key Question

Commuting

60 min Distance

(Power of
City Competitiveness)

10km (M, J, M...)
25km (Seoul)
50km (Tokyo)

How?, What first?,   ADB Role?

25km

50km
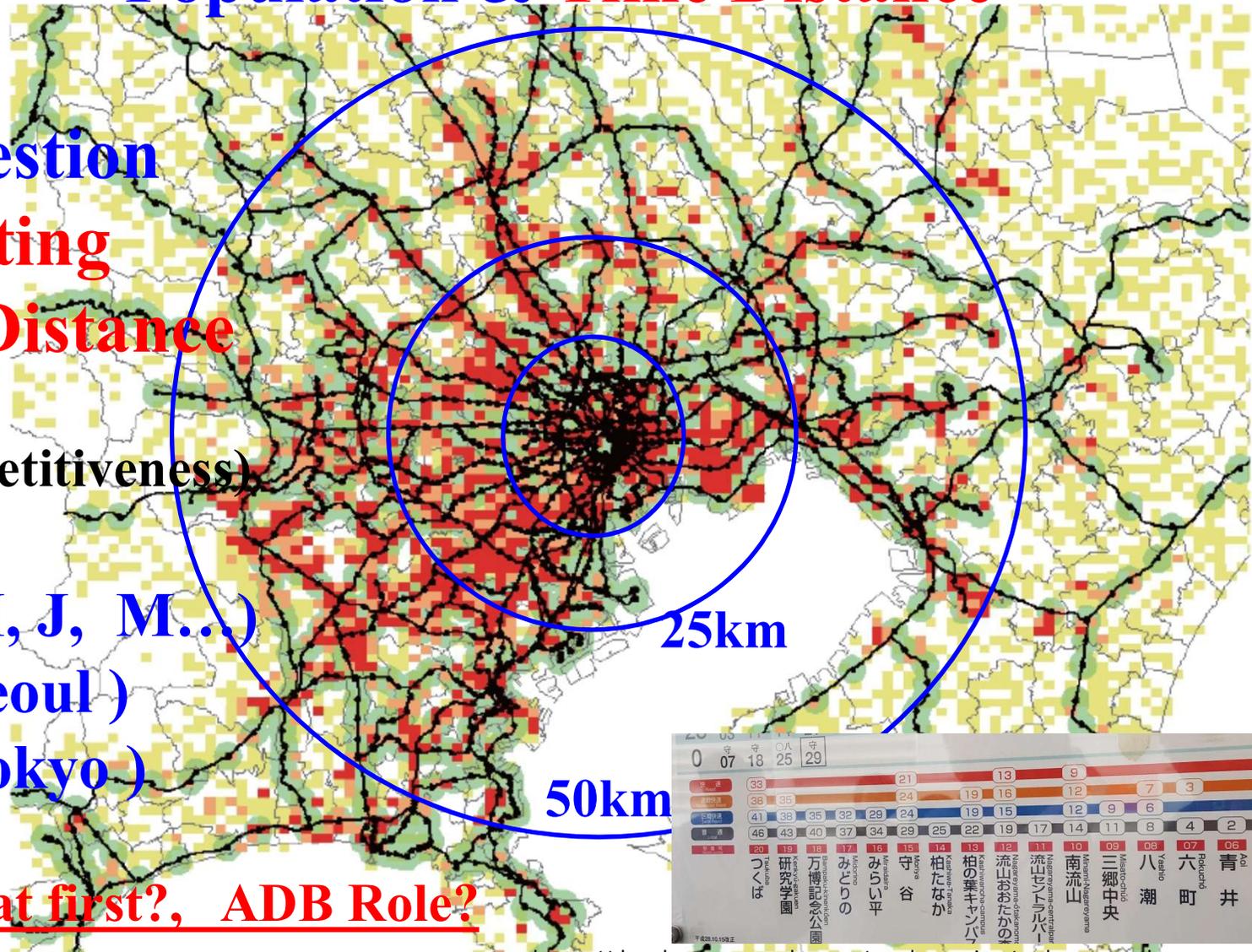
https://developers.google.com/earth-engine/reducers_reduce_to_vectors

Rail Network System Hierarchy in Japan

Area Coverage	Technology	Op Speed (km/h)	Regulator	Operator
National	HSR: **Maglev, Shinkansen**	**500-600** **200- 300**	Nat' GOV	**JR (2020 ?)** **(1964, Olympic)**
National	Trad' Rail Local Train	**100- 250**	Nat' GOV	**JR**
Greater Metropolis	**Express S-train** Commuter Rail	**60-150**	Nat' GOV Province	**JR Private Com**
Metropolitan Tokyo	Massive Rail Train(10 cars)	**30- 90**	M PTA TMG	**Private R Com Tokyo Metro**
Core CITY (23)	Massive Train All stop service	**20-60**	TMG CITY	**Tokyo Metro Toei**
District	LRT, AGT BUS (Feeder)	**10-30**	Ward Municipality	**Private Com Toei**

DMC Application : How?, What first?, by Who?, When?, Where?
ADB Role : Which type TA?- System Improvement / Single PPP ??
HW or SW, HR Capacity??

How to get a World Class RAIL Transport System in place ?
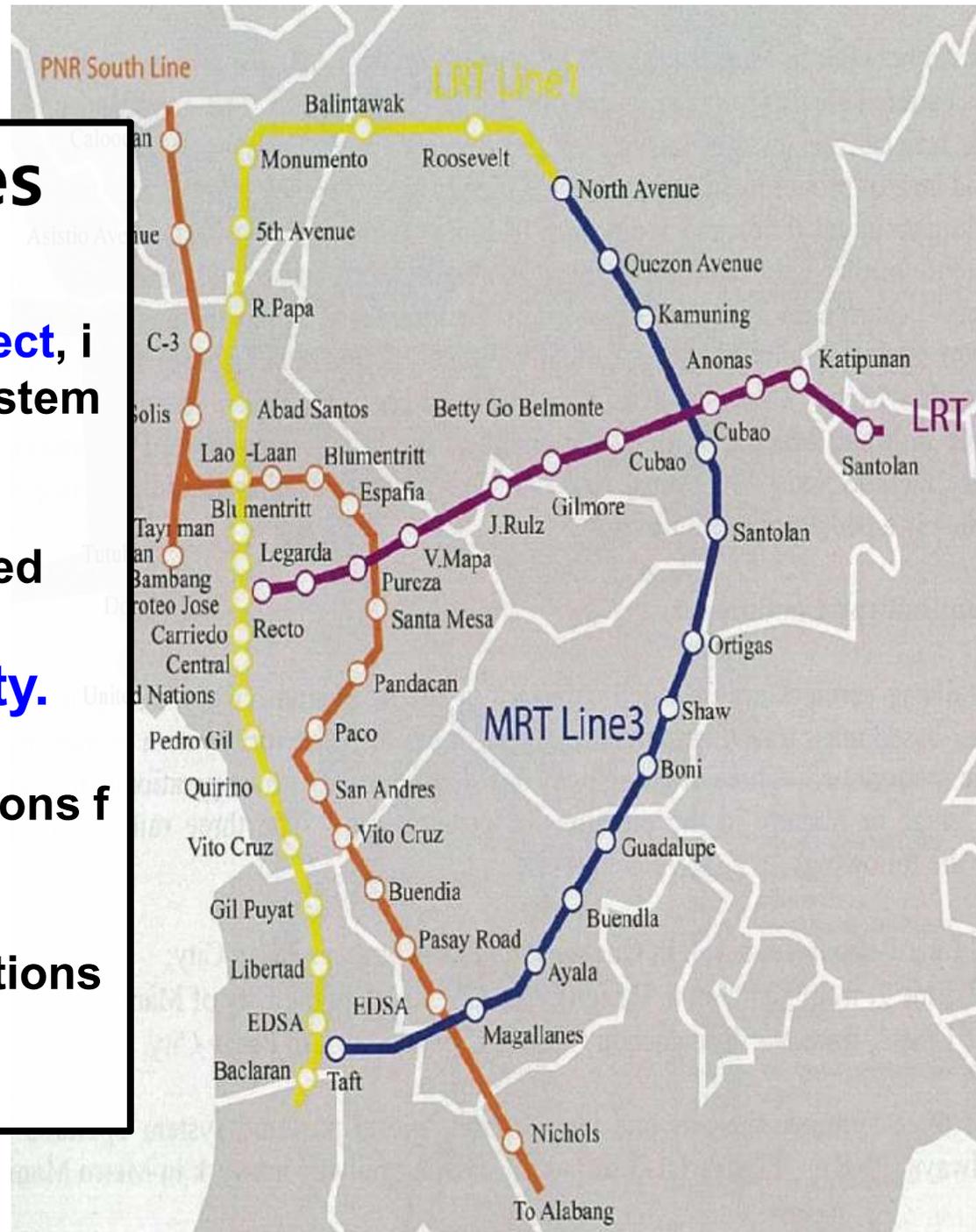
(Developing country, Phil)

(3)

Rail Networks
## - Existing
- Planned
- System Develop.

Existing Rail Lines

- **Each line is a separate project**, instead of being part of a system.

- **Technical specifications need to be aligned for future interoperability.**

- **Intersecting lines have stations far away from each other**

- **and need improved connections or common stations.**

Existing & Planned Rail Lines

- All new rail lines and extensions serve to move people from the suburbs into the city.
- Once in the city, options for mass transport are limited and congested
-
- Rail Lines only service until the out skirts of Makati, BGC, Ortigas, Cubao, etc.
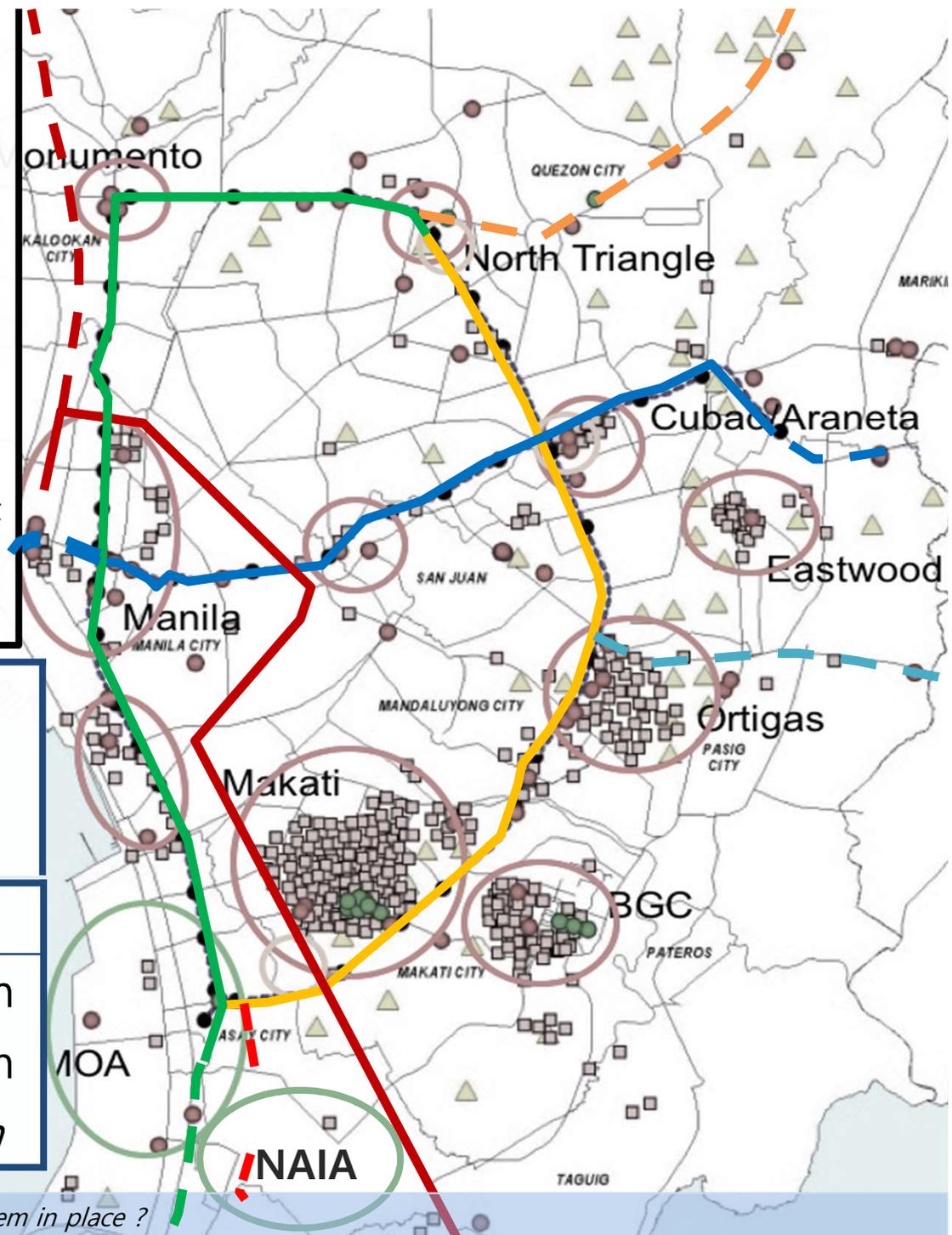
Total Jobs	4.7 M p
Current Rail	**78.7 km**
Planned Rail	71.2 km

Mass Transit Infra Index	
Current Rail	59,720 p/km
Inc. Planned Rail	31,354 p/km
Seoul, Korea	*8,832 p/km*

How to get a World Class RAIL Transport System in place ?

MM – Jobs Center Dev. Without HQPT
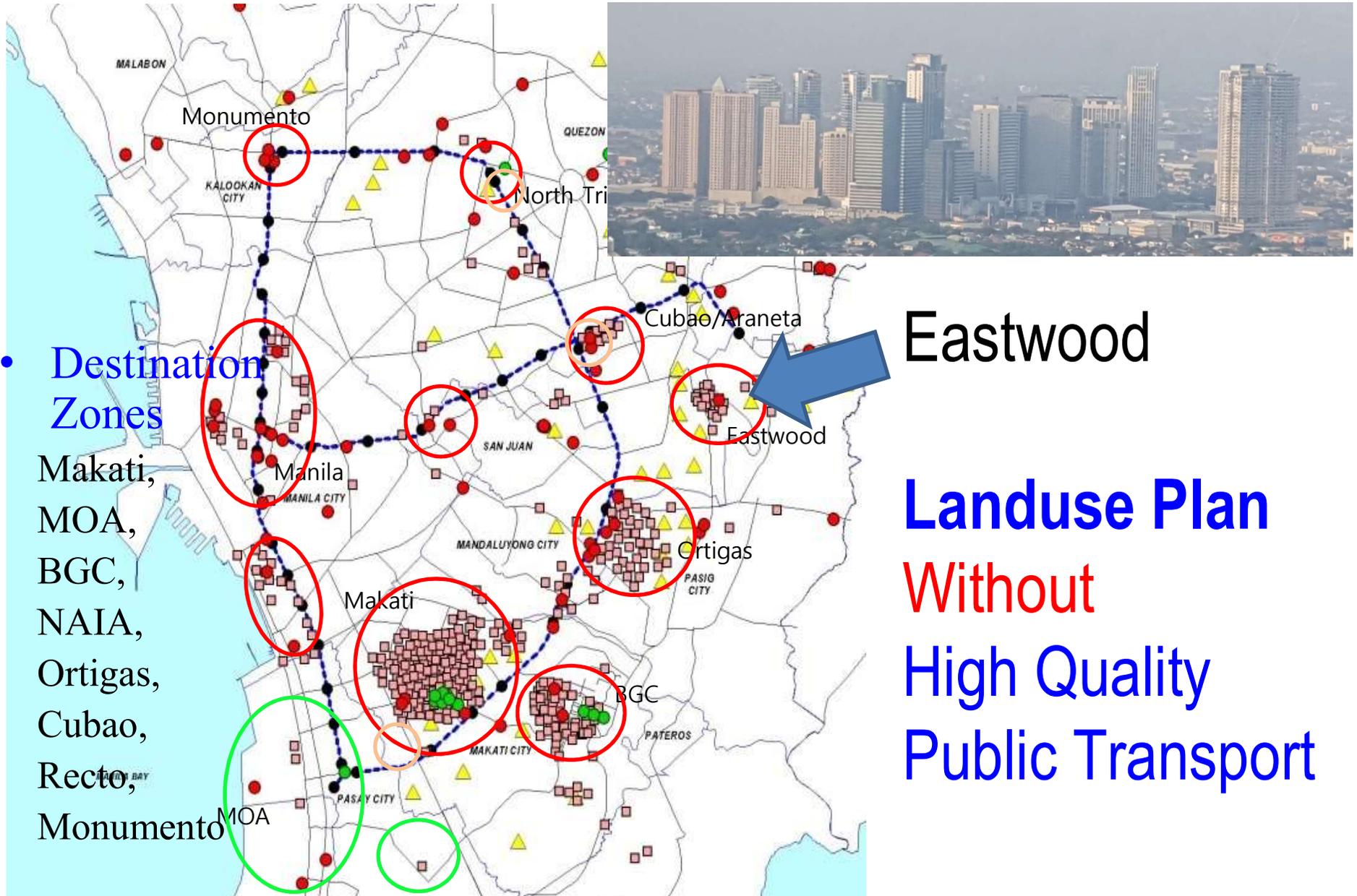
- Destination Zones

Makati,
MOA,
BGC,
NAIA,
Ortigas,
Cubao,
Recto,
Monumento

Eastwood

Landuse Plan
Without
High Quality
Public Transport

How to get a World Class RAIL Transport System in place ?

Major Zones of Jobs and Activities (Tokyo)

- **Destination Zones**

  Tokyo,
  Akihabara,
  Ueno,
  Ikebukuro,
  Shinjuku,
  Shibuya,
  Shinagawa,
  Shimbashi

  Yamanote Line

  29st'n, 34.5km

  1,1m pax/day

  10 cars-train, 180m

Major Zones of Jobs (Shinjuku)

https://google.com/Skyline/Shinjuku redevelopment

How to get a World Class RAIL Transport System in place ?
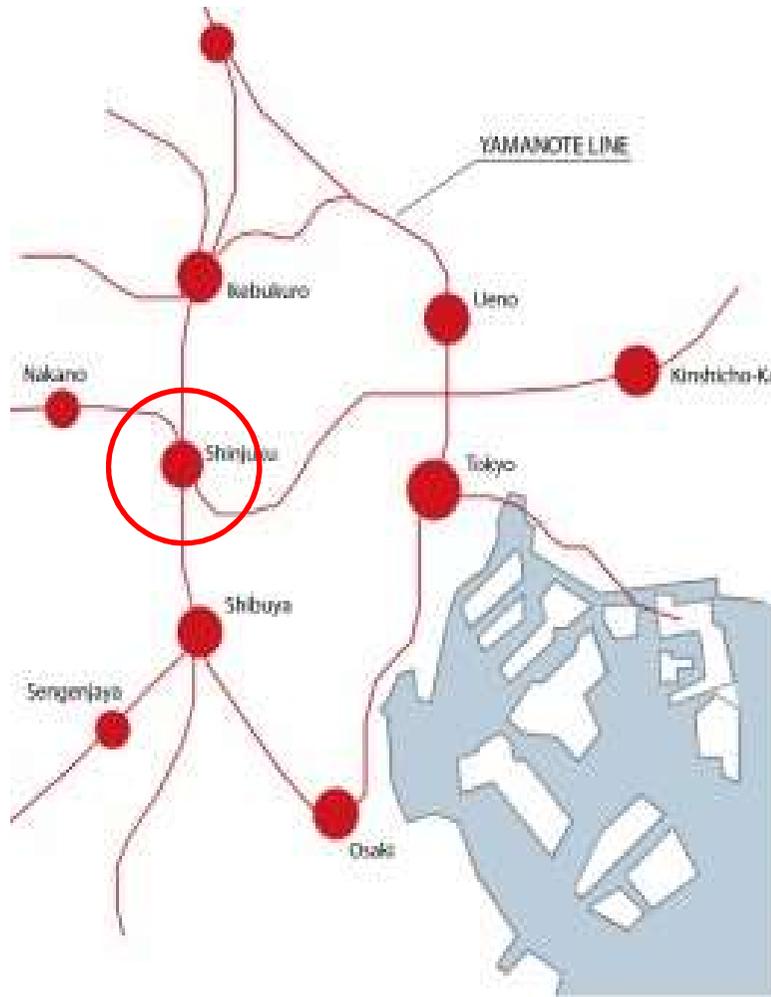
Major Zones of Jobs (Shibuya)

A Conceptual Illustration of the Completed Redevelopment

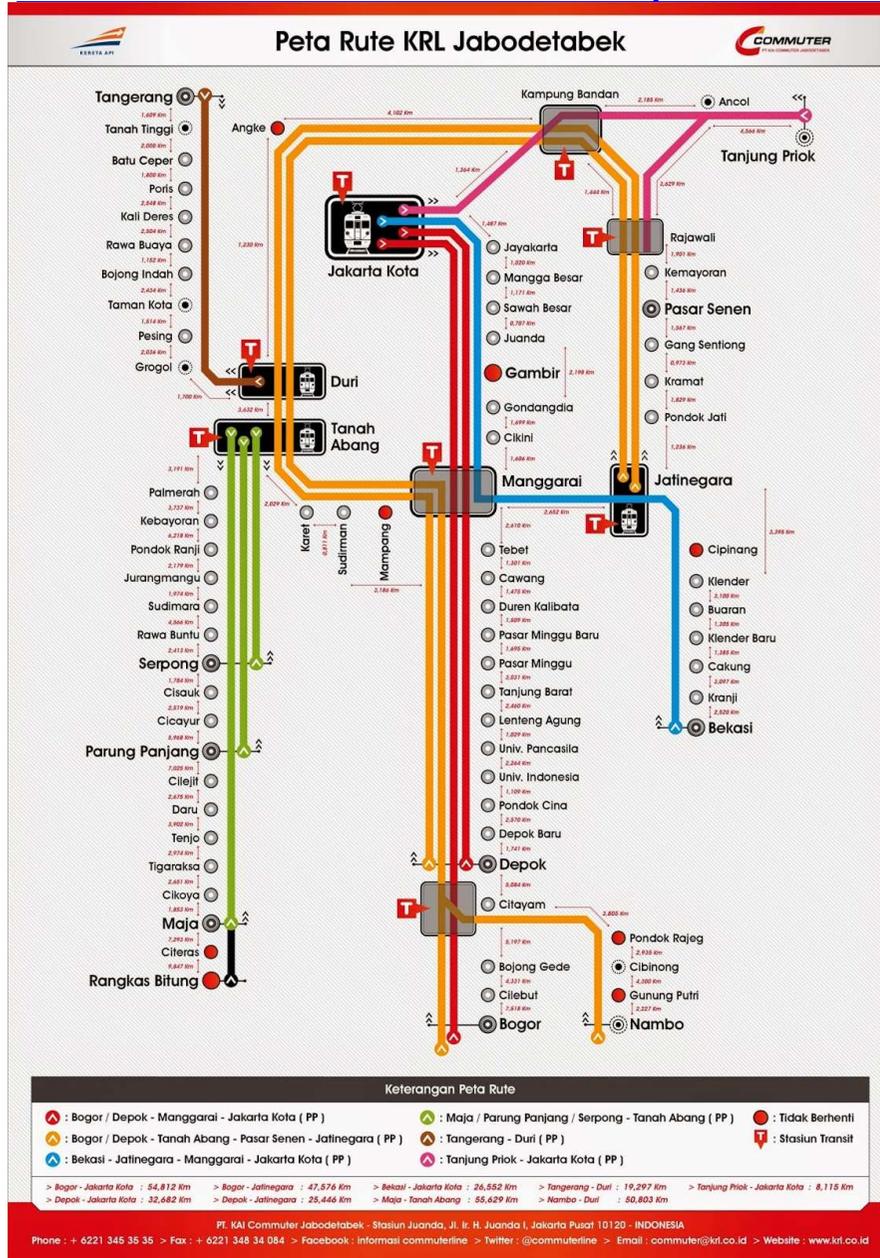https://google.com/Shibuya redevelopment

How to get a World Class RAIL Transport System in place ?
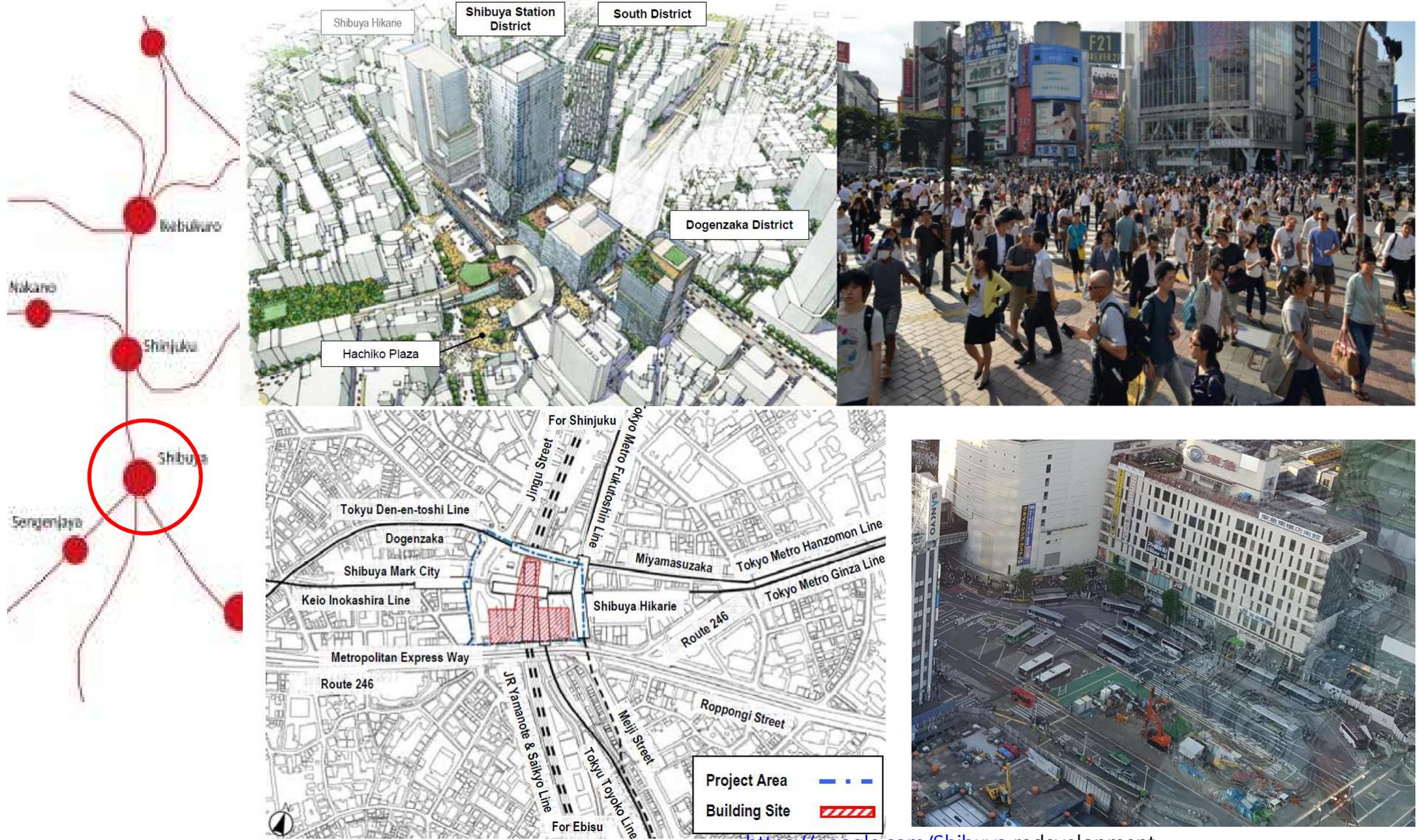
Yangon –Rail, Circle Under Utilization

https://www.google.com/wikipedia.org/Yangon_Central_Railway_Station

https://www.google.com/Yangon_Railway

How to get a World Class RAIL Transport System in place ?

Jakarta –Rail, Circle Under Utilization

https://www.google.com/Jakarta_Railway_Station

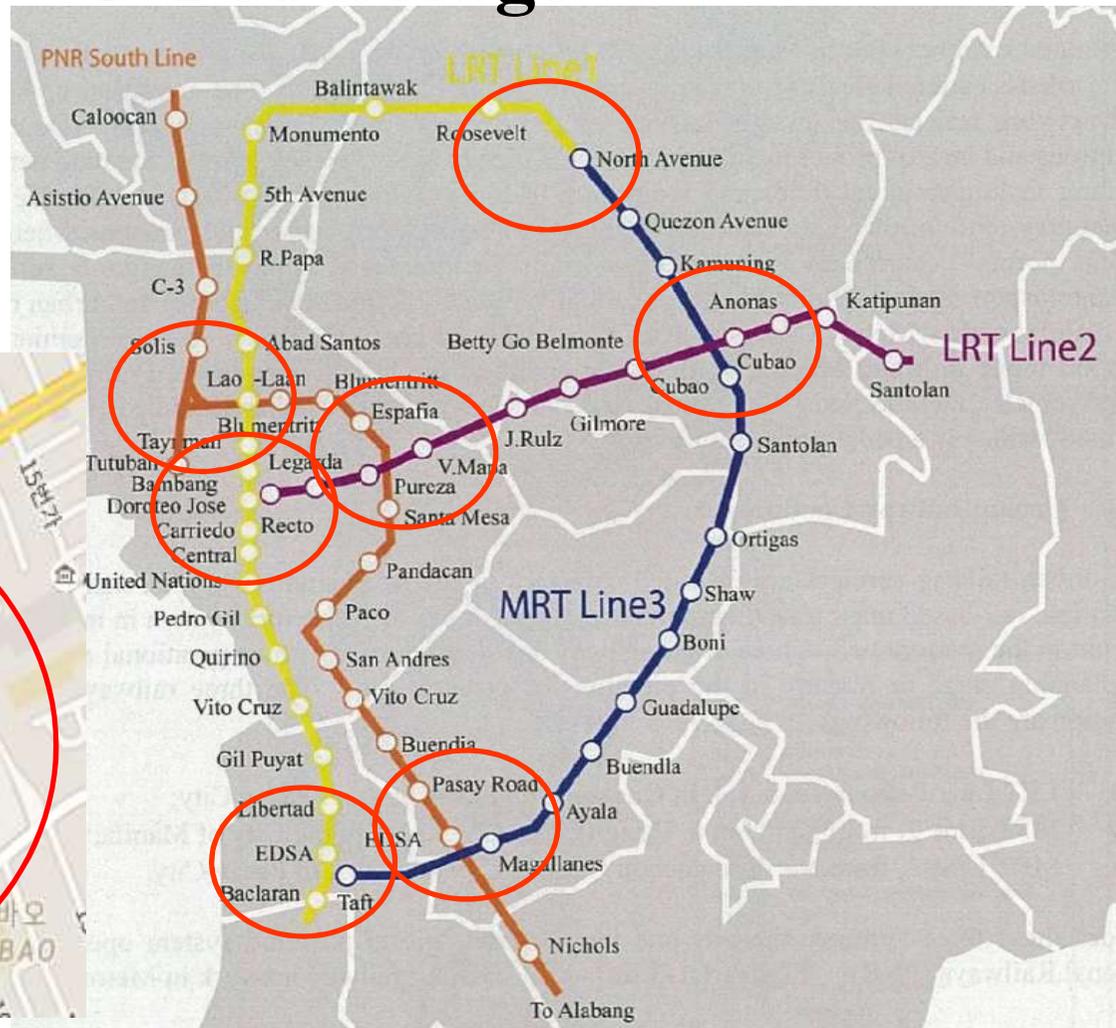*How to get a World Class RAIL Transport System in place ?*

Low Hanging Fruit (Rail sector)

7 Transfer Stn. → Ped-bridge

MRT3 ←→ LRT2

(Cubao Stn. 500m)

MRT3 ←→ LRT2 Transfer, (Cubao Stn. 500m)

https://www.google.com/earth

How to get a World Class RAIL Transport System in place ?

Restructure Rail Fare Level

Fare Comparison on EDSA w/ Origin at North Ave.

- While other modes have **adjusted fares to keep up with oil prices, inflation, and maintenance costs,** fares for rail have been kept heavily underpriced.

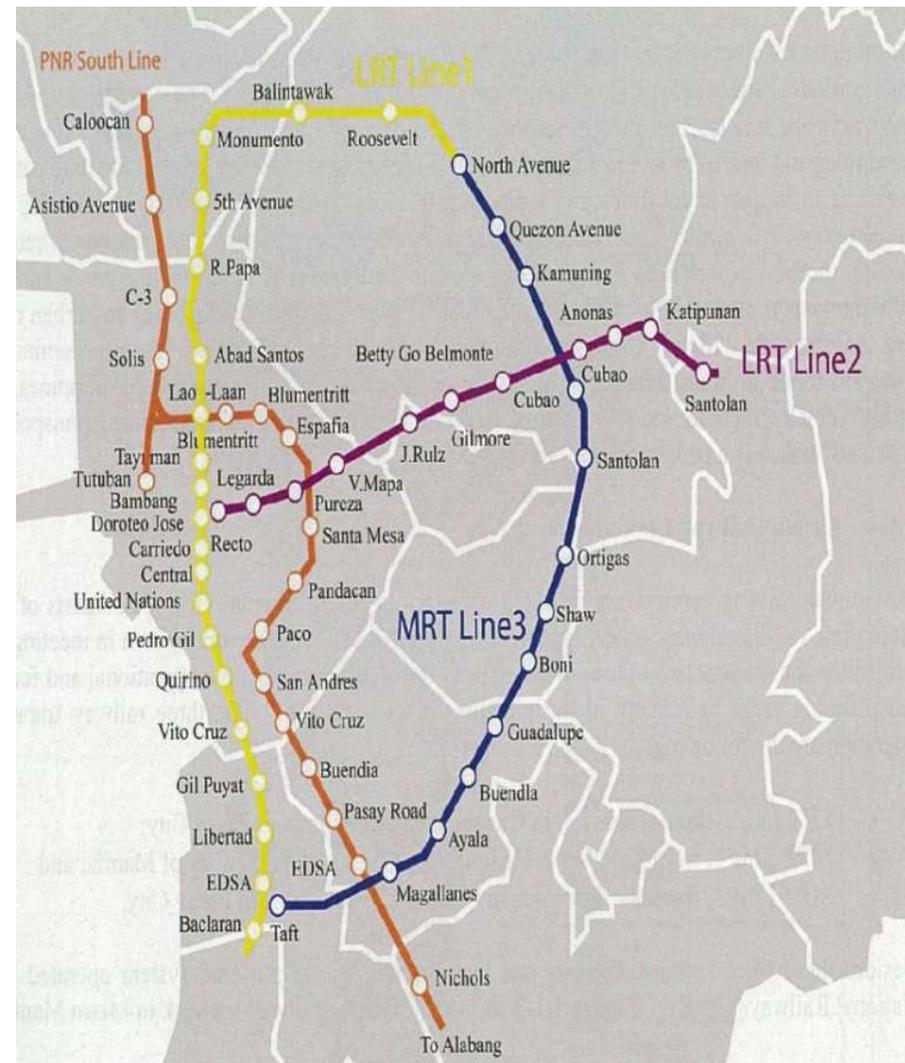**Fare Comparison Along LRT2 w/ Origin at Recto**
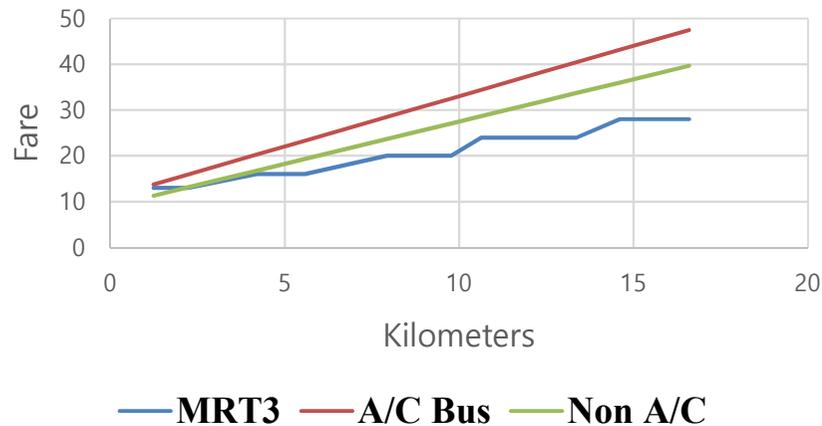
- **The fare level of rail lines in Metro Manila is lower than non-A/C bus.**
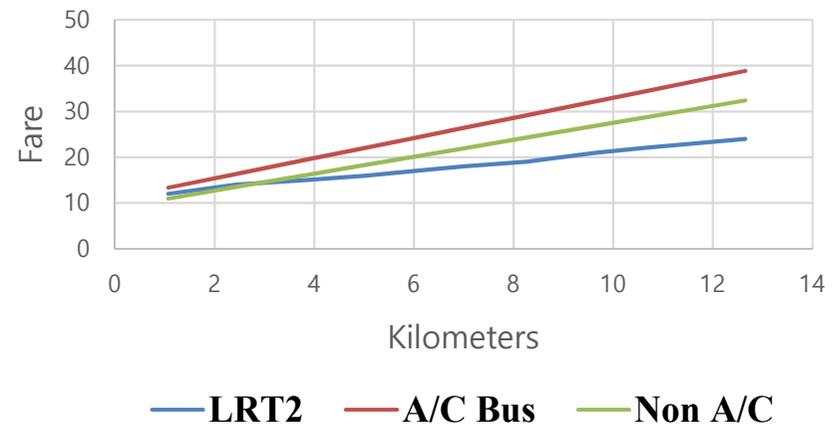
Low Hanging Fruit (Rail sector)

Park & Rail System, Feeder & Rail

https://www.google.com/Railway Park and ride

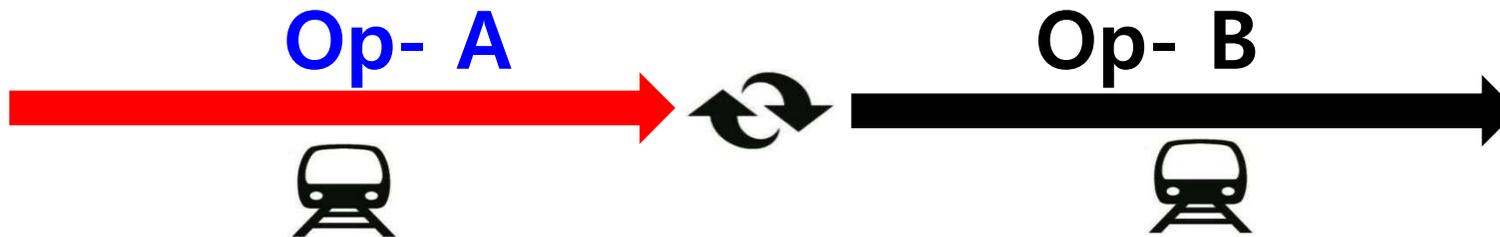# Infrastructure Integration :

Direct Joint Service

(ex) btw **Rails – "NO"** Transfer

Op- A   Op- B

- **"Through-Train Service" btw different rail lines.**
- **What Benefits & Cost?**
- **How? Pre-requirement ?**
Technical / Operational (**Revenue dividend policy**)

Direct Joint Rail Service ?
Why? Cross-platform Interchange !

Zero Transfer Time = Pas. Convenience
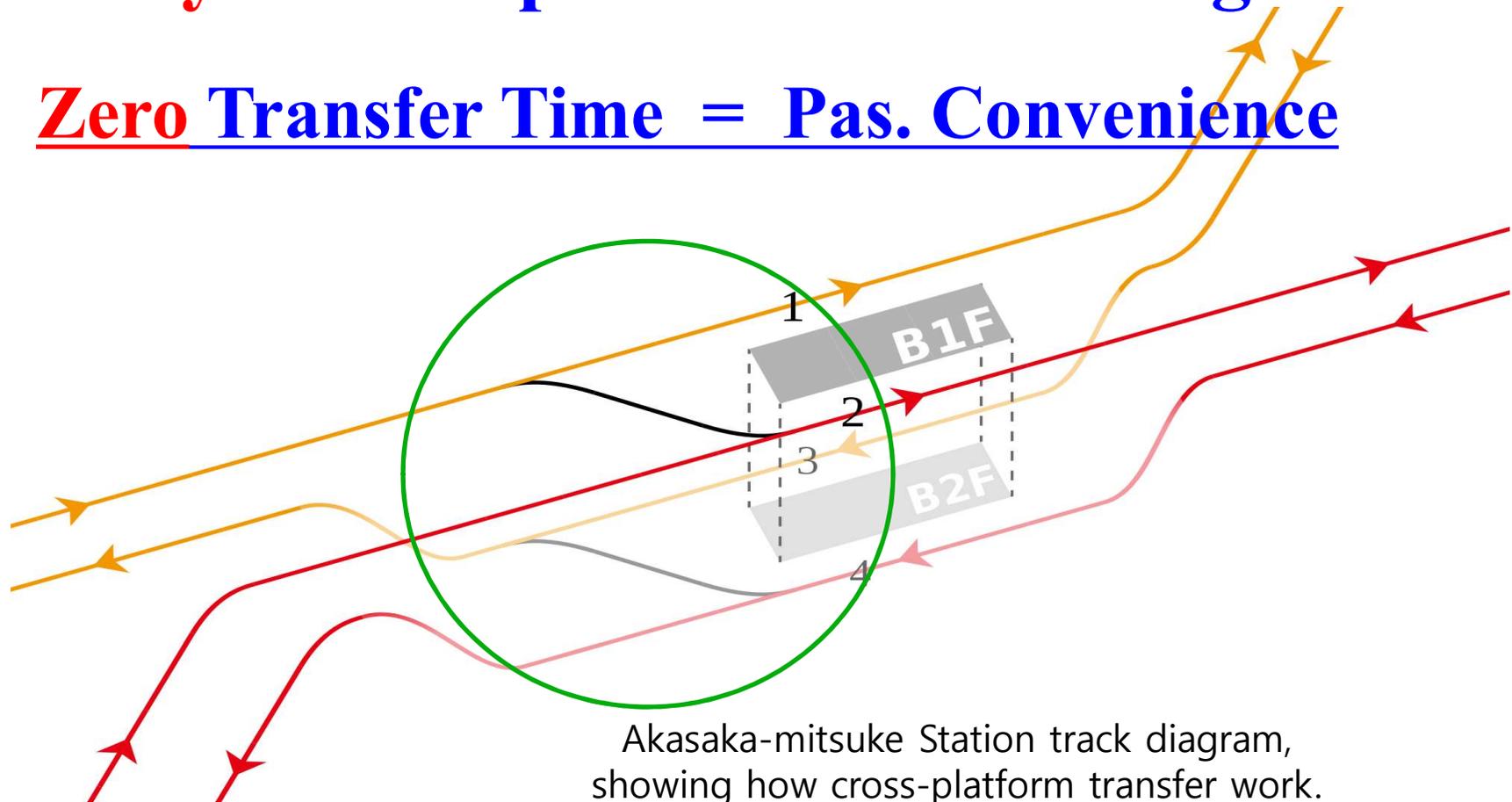
Akasaka-mitsuke Station track diagram,
showing how cross-platform transfer work.

https://www.google.com/railway line /interchange design/through train service

How to get a World Class RAIL Transport System in place ?

Why Direct Joint Service ?

Before Direct-through Operation

Commuter Train → 🧍 station 🧍 Subway →
Transfer

After Direct-through Operation

Commuter Train → Direct → Subway →
No Transfer

Ref: Dr. Hironori Kato

Perception Time Equivalence

Transfer time .EQ. 3-4 times of In-vehicle time(IVT)

5 min transfer = 15 -20 min IVT

In the rail,

20 min means 10 km journey.

Direct Service : What Pre-Requirement ?

1.   **Standardization Planning**

   Signal. Gauge, Door location,
   Fare collection system, Train specification
   (Height, Length, Width, Performance),
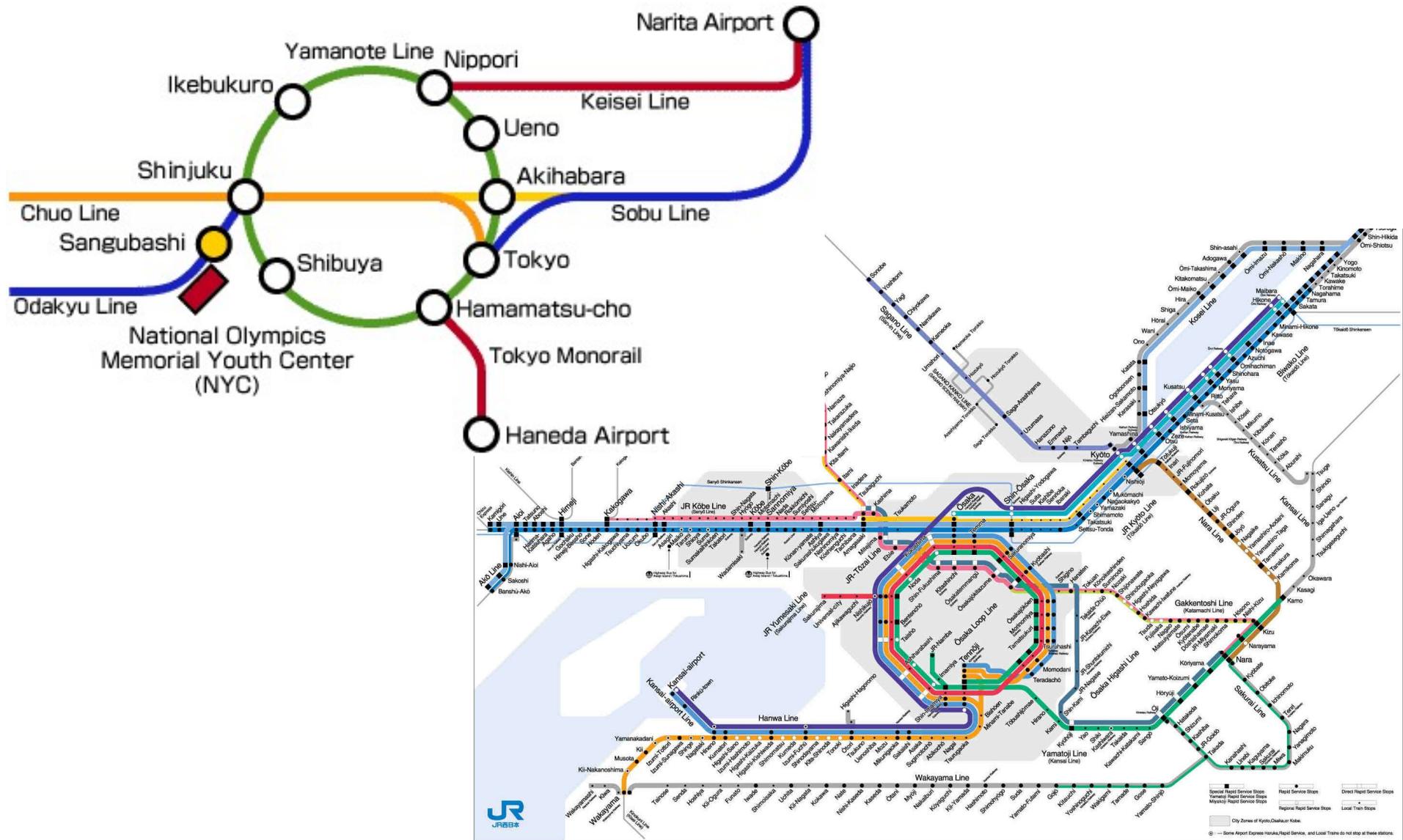   **Platform(Height, Length)**

2. **Construction and Execution**

   Time line - opening stages

3. **Operation**

   - Service interval, Train set length,
   Revenue Settlement, Responsibility of incident.

Circular Structure, Tokyo, Osaka

https://www.google.com/Osaka railway line

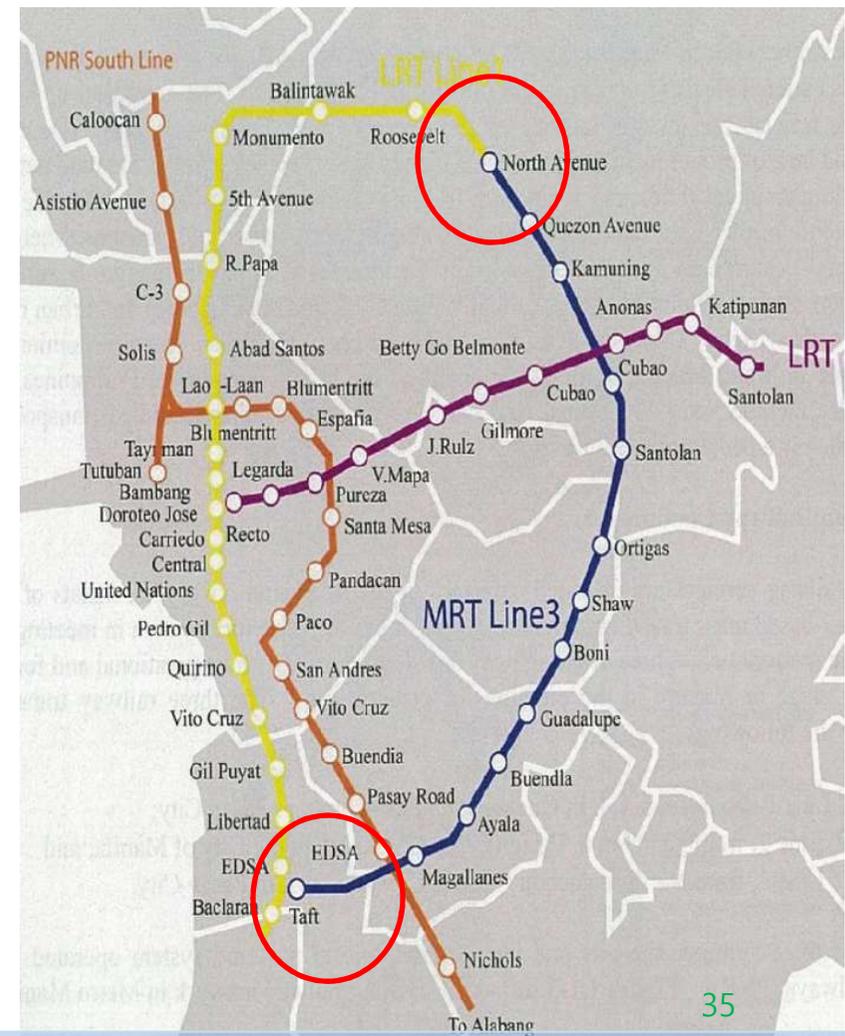*How to get a World Class RAIL Transport System in place ?*

LRT1 & MRT3
→ <u>Circular Line Function</u>, 2min?
Tokyo, Seoul, Osaka

Discussion Issues?

- 2 double track?
- Infra Ownership?
- Priority of Investment?
- PTA in Greater Manila ?
- Re - negotiation ?
- Technical Issues ?
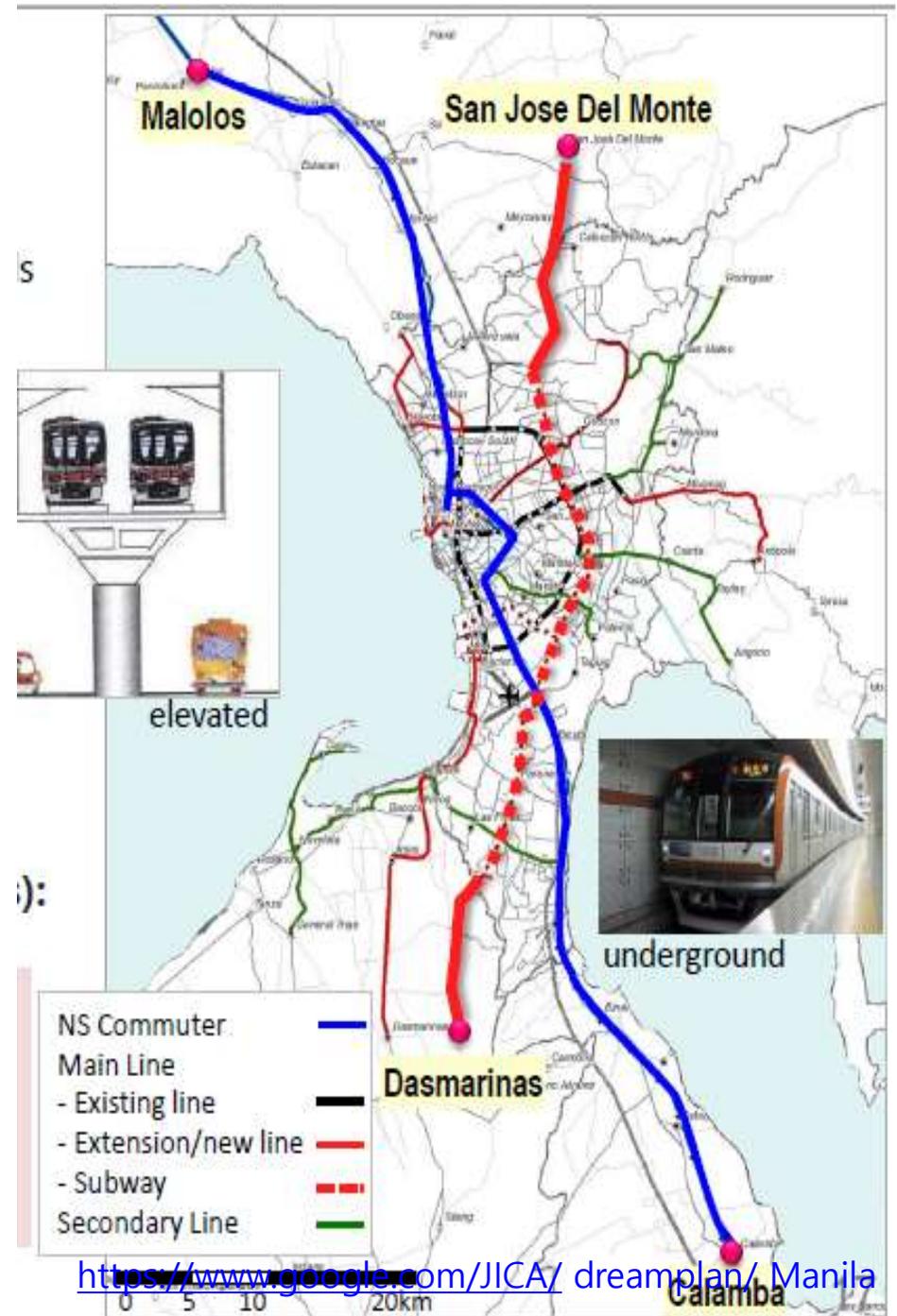   (Standard signal, etc.)

Rail Dream Plan

JICA 2012

Urban/Suburban Rails

318km

Main line: 246 km
(6 lines)
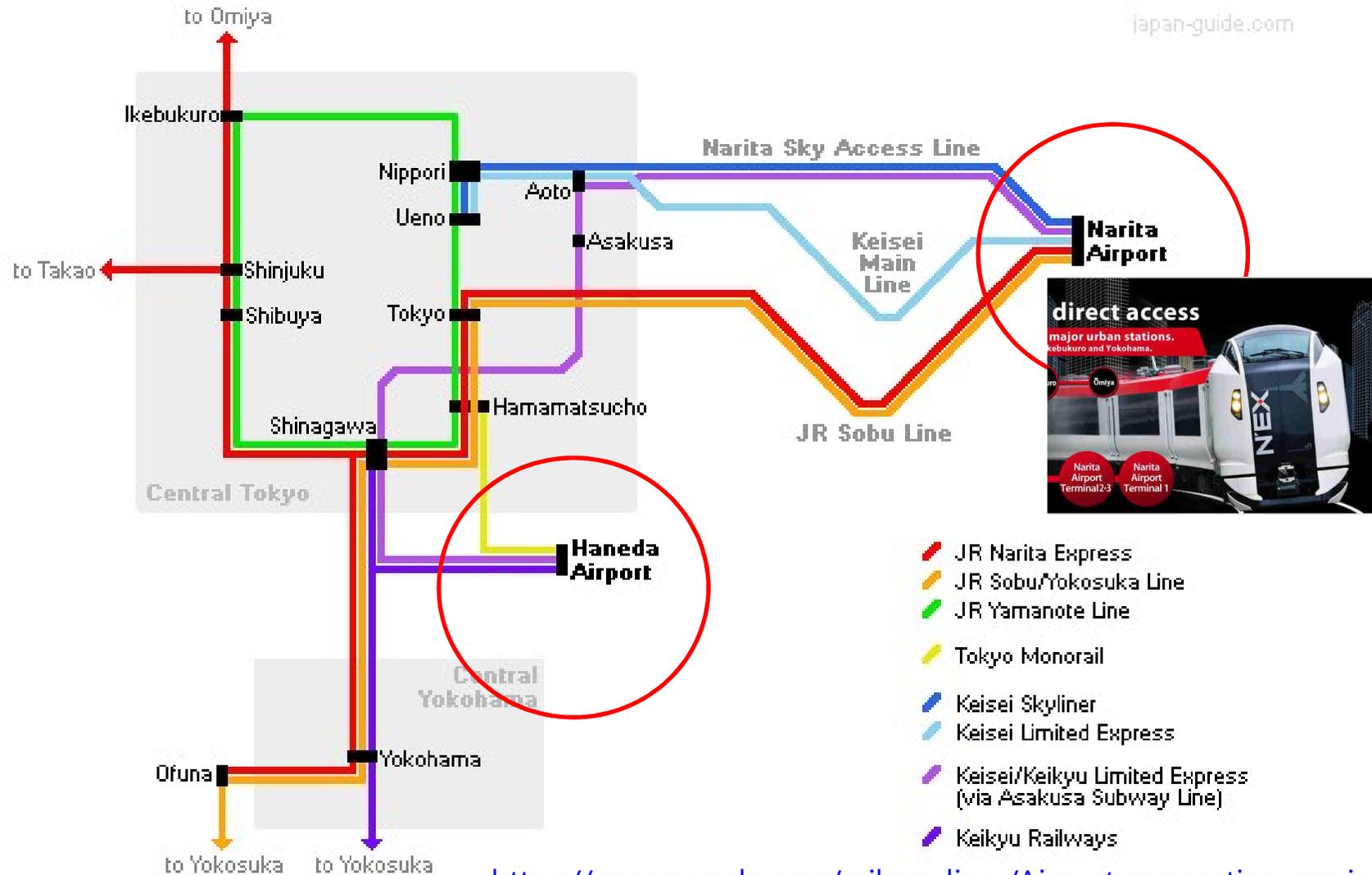**Secondary line: 72 km**
(5 lines)
Integrated lines and improved accessibility

elevated

underground

NS Commuter
Main Line
- Existing line
- Extension/new line
- Subway
Secondary Line

https://www.google.com/JICA/ dreamplan/ Manila

Tokyo, Narita – Haneda
by Express Airport Rail

to Omiya

japan-guide.com

Ikebukuro

Narita Sky Access Line

Nippori

Aoto

Narita Airport

Ueno

Asakusa

Keisei Main Line

to Takao

Shinjuku

Tokyo

direct access

major urban stations.
Ikebukuro and Yokohama.

Ōmiya

NEX

Narita Airport Terminal 2·3

Narita Airport Terminal 1

Shibuya

Hamamatsucho

Shinagawa

JR Sobu Line

Central Tokyo

Haneda Airport

Central Yokohama

Ofuna

Yokohama

to Yokosuka

to Yokosuka

- JR Narita Express
- JR Sobu/Yokosuka Line
- JR Yamanote Line
- Tokyo Monorail
- Keisei Skyliner
- Keisei Limited Express
- Keisei/Keikyu Limited Express (via Asakusa Subway Line)
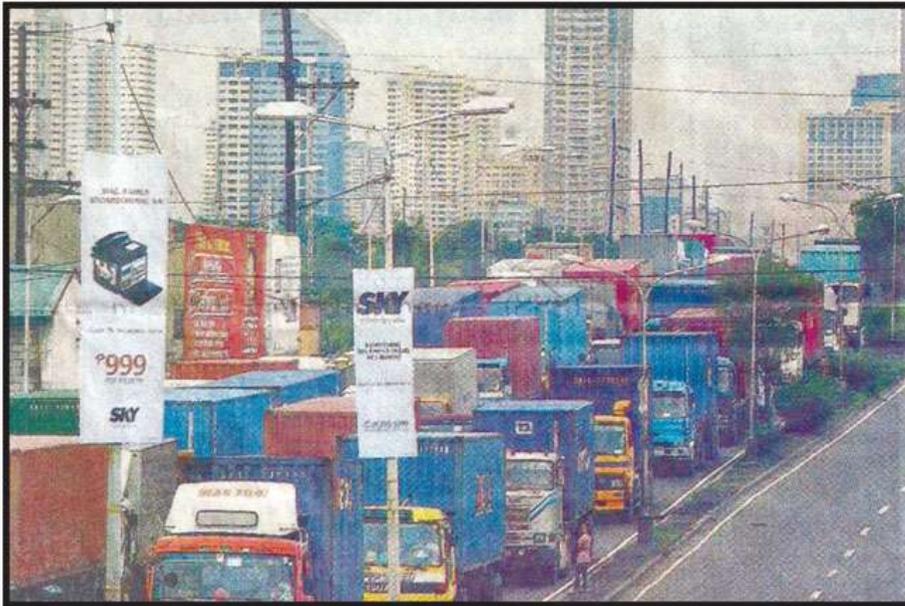- Keikyu Railways

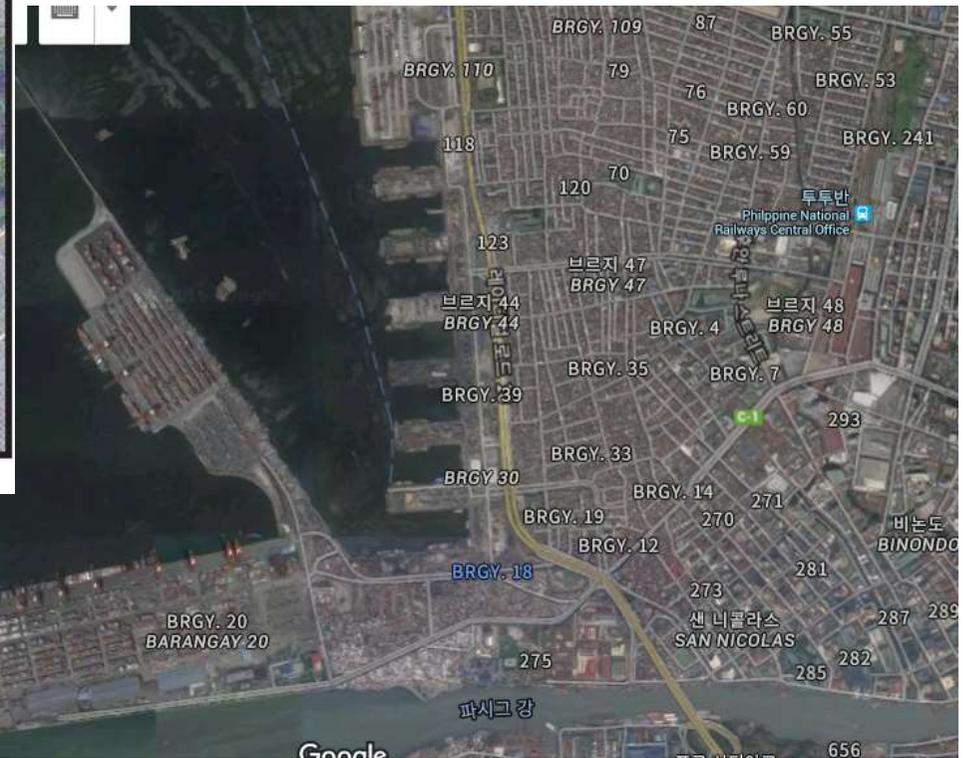https://www.google.com/railway line /Airport connection service

Port - Connection

Sea + Inland(Logistics Hub)
by Truck only or Rail connection ?

Rail from **Tutuban to Seaport?**

2 km

Source: The Philippine Star, July 16, 2010

How to get a World Class RAIL Transport System in place ?

Rail Network Planning

5 Principles

for the public transport network effect

1: Coordinate convenient transfers

2: Speed, Consistency and Reliability

3: Direct Network Structures

4: Hierarchy of Network with Air/ Sea port

5: Provide clear, ubiquitous

      and consistent information and marking

https://www.google.com/Switzerland Rail/

Recommendation, Short Term Action Task

Low Hanging Fruit (Rail sector)

1. **# of Train** (Capacity increase) – PNR, MRT3

2. **Fare Integration** – Transfer **Free** (LRT2-MRT3 first)

3. **Transfer Stn. - Ped-bridge (Cubao Stn., etc)**

4. **Facility Quality** – Toilet, Baby Room…

5. **Rail Academy(HR)** Grant (DOTC-i)

6. Standard **System** and **Speed** Goal **Setting**

7. **Airport Stn. in LRT1 Depot**

8. **MM Circular Line, Common Stn. – Master Plan**
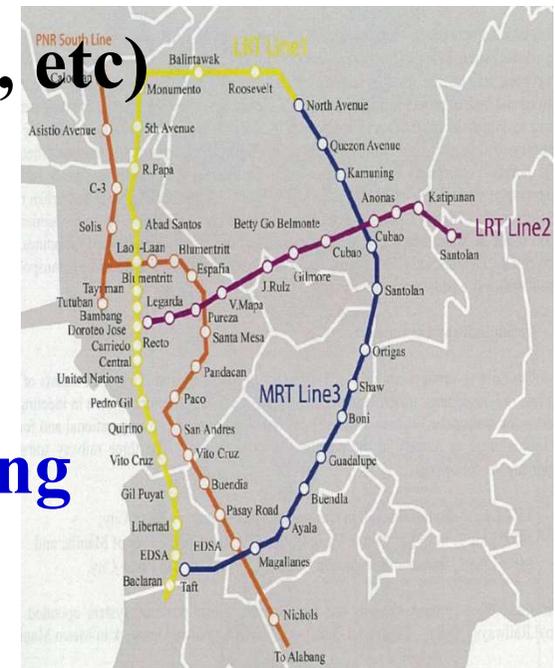
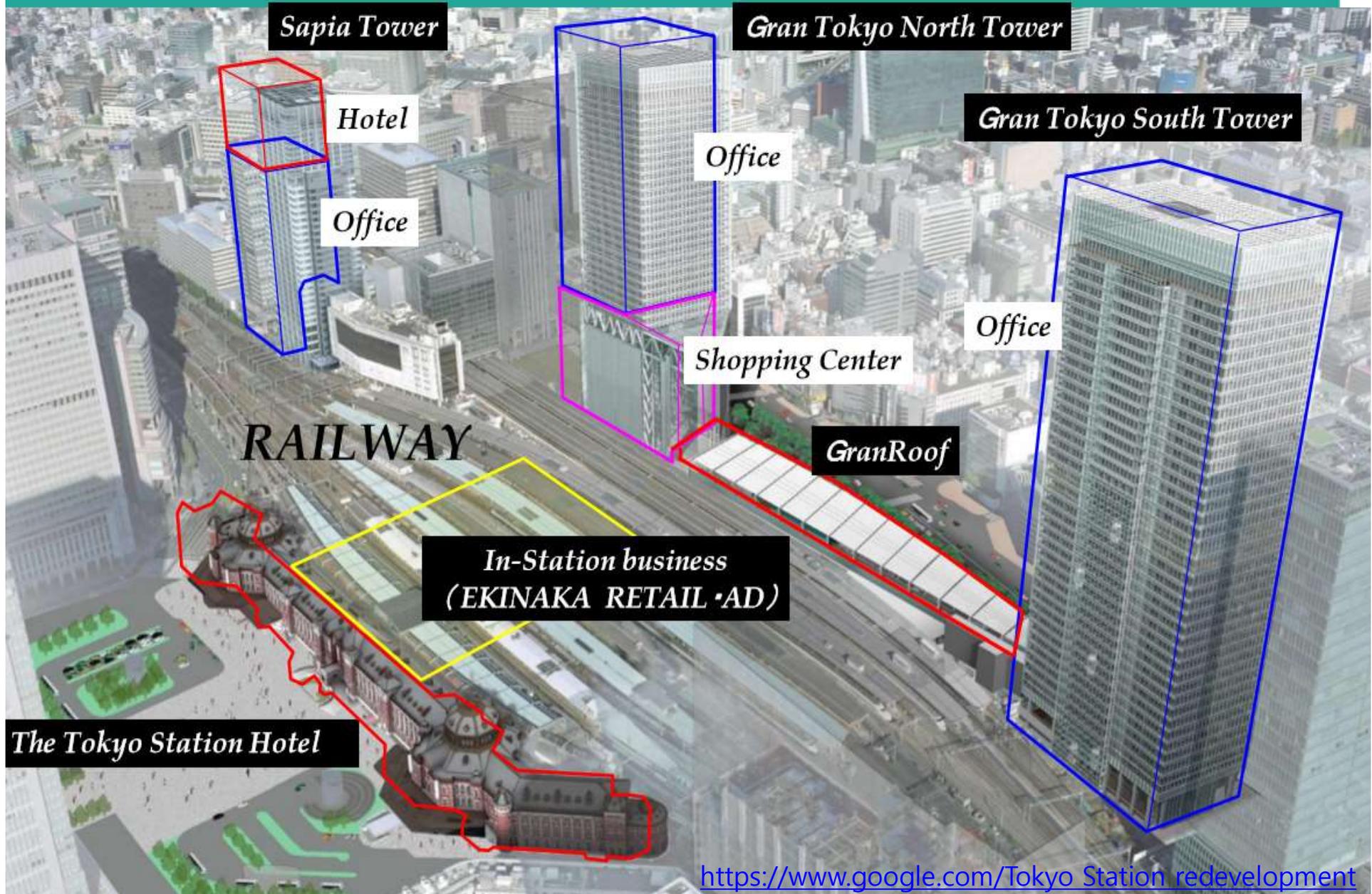# **(4)** **Sustainable Fund, Institutional Issues**

Fuel Tax
LVC: R+P

Integrated Tokyo Urban Railway

How to get a World Class RAIL Transport System in place ? **Rail + Property development**

TOKYO STATION CITY

Sapia Tower — Hotel / Office

Gran Tokyo North Tower — Office

Gran Tokyo South Tower — Office

Shopping Center

GranRoof

RAILWAY

In-Station business (EKINAKA RETAIL・AD)

The Tokyo Station Hotel

How to get a World Class RAIL Transport System in place ?   **Rail + Property development**

Integrated Urban Railway Station, How?

TOKYO STATION CITY

Sapia Tower
Hotel
Office
Gran Tokyo North Tower
Office
Gran Tokyo South Tower
Office
Shopping Center
RAILWAY
GranRoof
In-Station business
（EKINAKA RETAIL ·AD）
The Tokyo Station Hotel
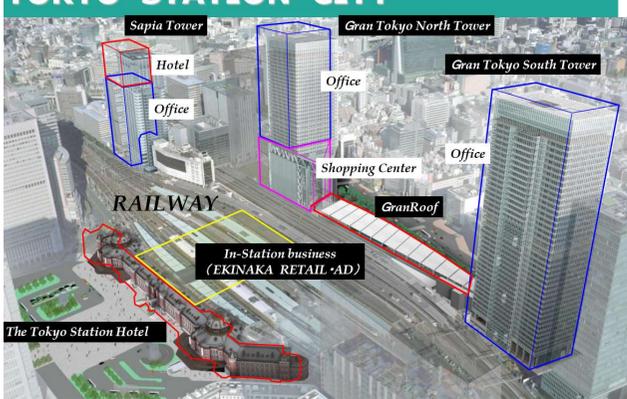
If ask about " Tutuban", in Manila ;

" Where is the Manila Central Stn?"

Access by car through minor road?

TOD + LVC, How?

How to get a World Class RAIL Transport System in place ?   ***Rail + Property development***
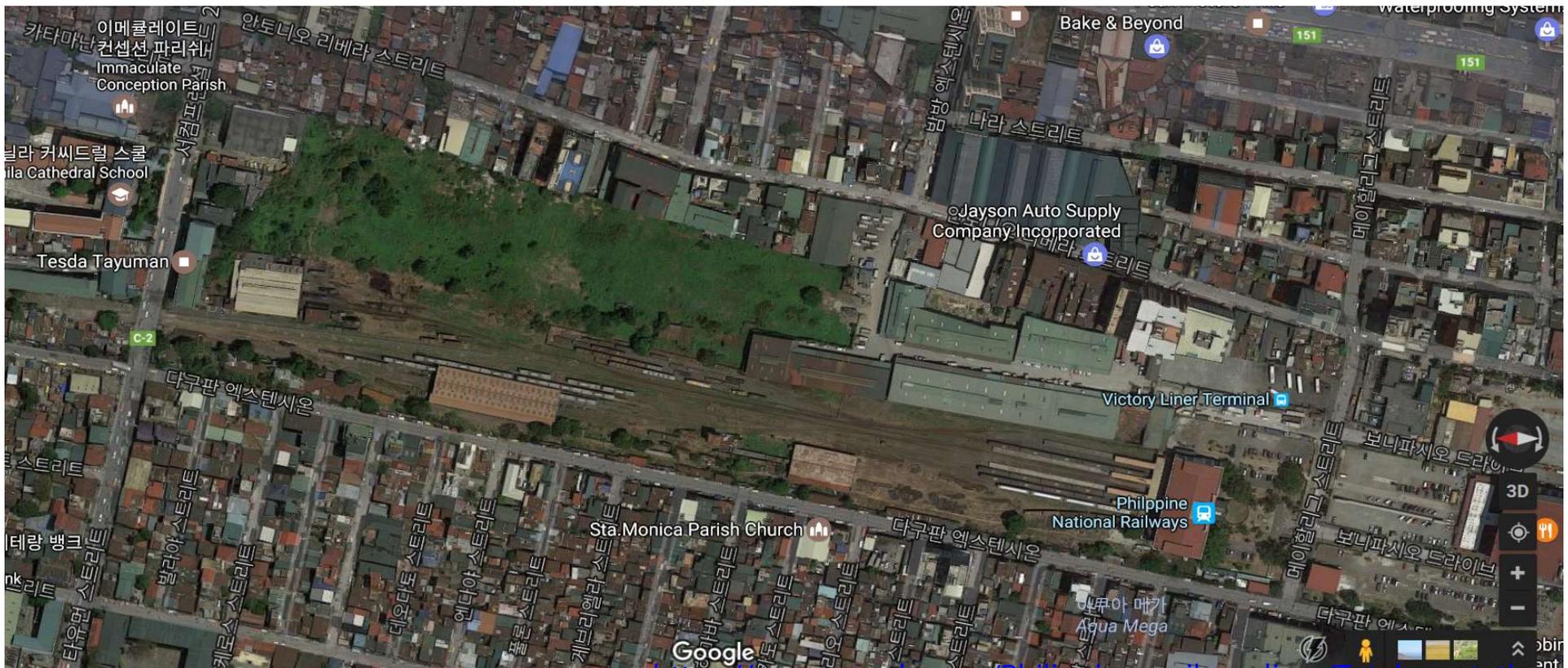
LVC(Value Capture), Tsukuba Railway

58 km
20 Stations

Total **2,908** ha
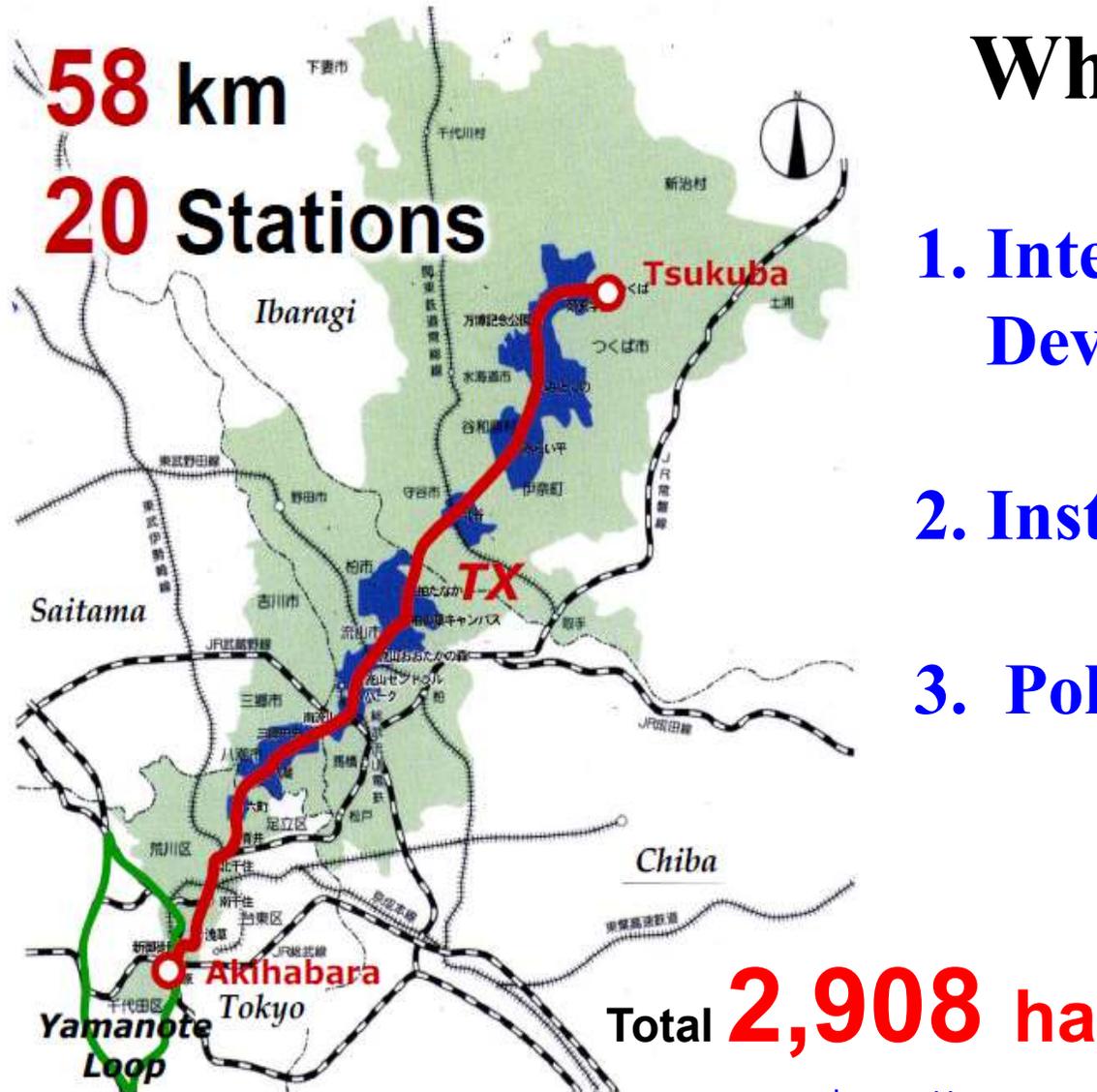
What's the KSF?

1. Integrated **Housing-Rail Development Act of 1989**

2. Institutional Reform

3. Political Leadership

https://www.google.com/Tsukuba Express/re-development

How to get a World Class RAIL Transport System in place ?   ***Rail + Property development***

Institutional Development & Reform

1. GOV. : Policy, Law, Registration, Leading spirit

- Planning, Governance, Accumulated Knowledge, Capacity

2. Rail Construction Authority : Self-Fund

- Implementation, Design & Procurement Knowledge, Capacity

3. Operator : Service & Safety Spirit(Zero crash- 50Years)

- Competition for the Market, Safety Knowledge, Opex(Profitable?)

4. HR- Education & Tech. Institution – Top 10 from Univ.

- Human Capacity & Knowledge, Capacity (JIC, JARTS)

5. SOC(Social Overhead Capital): Consensus/ Private Sec.

- Social Acceptance & Knowledge, Capacity

Institutional Development & Reform

SOC(Social Overhead Capital): Consensus/ Private Sec.

- Social Acceptance & Knowledge, Capacity

How to get World Class Urban Rail System in DMC?

(5)

How?, What first?, by Who?, When?, Where?

ADB Role : Which type TA?-

System Improvement / Single PPP ??

HW or SW, HR Capacity??

Main Activities (June 19-21, 2017)

1. **Railway network Exp'n + OP. in Tokyo**
   - **Mechanisms to support the historical expansion**
     Japan Railway Technical Service (JARTS),
     Institute of Transportation Economics (ITE)
   - **"Mutual through train operation" :**
     Direct train services between different lines
     Tokyo Metro Co. Ltd. (Tokyo Metro) : Kitasenjyu Station (Rail hub)

2. **Tokyo Station Development (TOD) & LVC**
   - **Cooperation with local/national government**
     Japan International Consultants for Transportation (JIC),
     East Japan Railway Company (JR East)

   Land Value Capture(LVC)
   - **Tsucuba Express Rail (TX)**
     Metropolitan Intercity Railway Company (MIRC)

Questions : Major Problem Identification :

1. **Asian mega-cities' rail network development,**
(Planning, Implementation, O&M, Governance,
Institution, Education system, and its policies)

VIDEO
https://www.google.com/PNR railway line

Q: Rail System Hierarchy- DMC Application?

Area Coverage	Technology	Op Speed (km/h)	Regulator	Operator
National	HSR: Maglev, Shinkansen	500-600 200- 300	Nat' GOV	JR (2020 ?) (1964, Olympic)
National	Trad' Rail Local Train	100- 250	Nat' GOV	JR
Greater Metropolis	Express S-train Commuter Rail	60-150	Nat' GOV Province	JR Private Com
Metropolitan Tokyo	Massive Rail Train(10 cars)	30- 90	M PTA	Private R Com Tokyo Metro
Core CITY (23)	Massive Train All stop service	20-60	CITY	Tokyo Metro Toei
District	LRT, AGT BUS (Feeder)	10-30	Municipality	Private Com Toei

How?, What first?, by Who?, When?, Where?

ADB Role : Which type TA?- System Improvement / Single PPP ??

HW or SW, HR Capacity??

How to get a World Class RAIL Transport System in place ?

Questions

2. Direct Train Services : "Mutual through train operation",

1) What are the main problems for implementing in Asian developing countries? How could we overcome them?

(Planning, Governance, Institution, Knowledge, Capacity)

2) How do we measure its benefit ?

3) What are the " Pre-requirements" for this?

Q: DMC Application :
Direct Service- What Pre-Requirement?
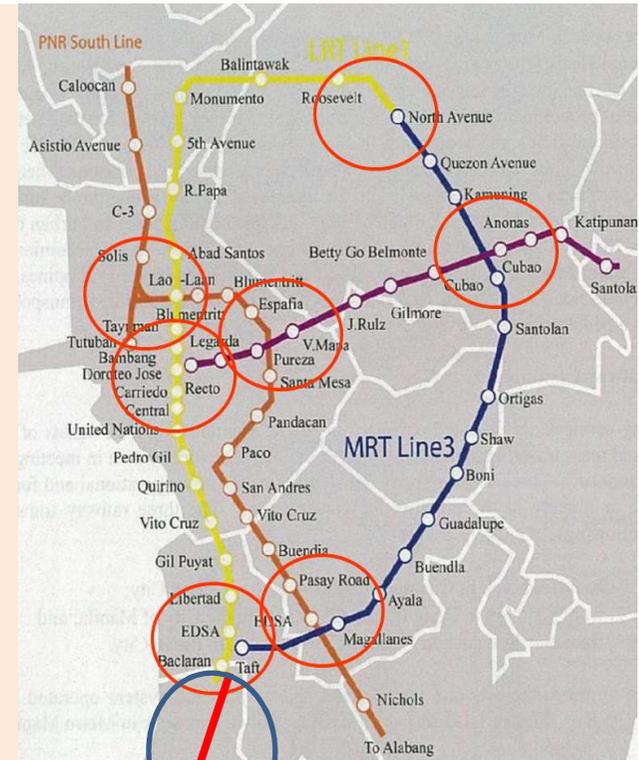
1. Standardization Planning

Signal. Gauge, Door location,
Fare collection system, Train specification
(Height, Length, Width, Performance),
Platform(Height, Length)

2. Construction and Execution

Time line - opening stages

3. Operation Negotiation

- Service interval, Train set length,
Revenue Settlement, Responsibility of incident.

Single PPP (???)

How?, What first?, by Who?, When?, Where?
ADB's Role : Which type TA?- System Improvement / Single PPP ??
HW or SW, HR Capacity??

How to get a World Class RAIL Transport System in place ?

Questions

3. TOD : "Transit Oriented Development",

1) Central Station, What are the main problems?

How could we overcome them?

Asian central stations such as Manila, Yangon, Jakarta, etc.

2) What are the Pre-Requirements for TOD's

success? How do we measure the benefit ?

Planning Governance, Institution, Knowledge, Capacity

4. LVC : "Land Development Value Capture",

1) What are the main problem? How could we

overcome them? law and institutional issues.

2) How do we learn from TX

(Tsukuba eXpress rail)

Questions -- <u>More urgent issues?</u>

A. Project Development Issues

 1) **New line** project development

  (Planning- Implementation- O&M – Monitoring)

 2) **Existing lines'** Improvement

 (rail-elevation, electrification, Speed-up, Convenient service such as direct train operation, information service, etc.)

B. Capacity Building Issues

 1) Institutional reformation,

 2) Financing agenda

** ADB's Role → Proposal

  TA Dev.-System Improvement, **not** Single PPP

   HW or SW, HR Capacity/ Institutional Building

How to create an excellent Rail system?

Developing an excellent Rail system is **not** so much a matter of technology and money.....

.....but a matter of **vision, leadership, making choices,** organisation, management, knowledge, innovation and hard work

DMC : World-class Urban Rail Transport System

What do we learn from Tokyo Experiences
Urban Railway System
(Questions)

Gyeng Chul KIM, Ph.D., P.E., Prof.
Public Transport Planning and Policy Specialist
Former President, Korea Transport Institute (KOTI)
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Mechanism - **Comments and Question(I)**
to support the historical expansion of R network

- Post-war period of **rapid urbanization** (1955-1970) : 2 Tasks
  1) Provide affordable **housing**
  2) Extension or Improvement of **existing rail**(already RNetwork)
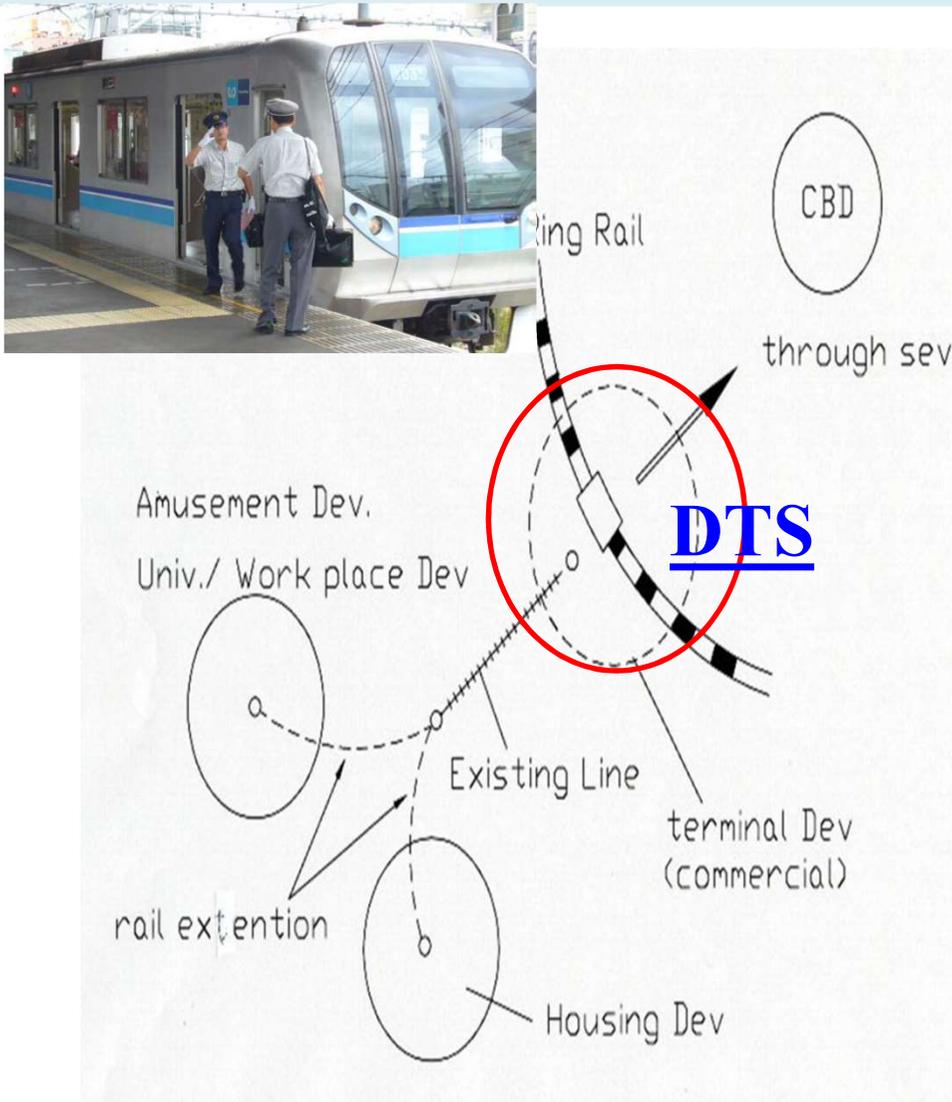
→ **Key Success Factors of Japan Model**

1)**Implementation** of suburban development – **private rail companies' initiative**, supported by central+local government
2)**Sharing development** benefit by private rail companies, **land owners** of suburban forest and less-productive farm land.
3) **Re-investment** to further rail-extension and
                        suburban development **by private rail companies.**

Question(1)
 to DMC, How create **private rail com. (Japan model)?**
 How, what first?,   What's the Gov's role, ODA's Role?

Mechanism - Comments and Questions(II)
to convenient R network "Direct Through Service(DTS)"

CBD

Ring Rail

through sev

Amusement Dev.

Univ./ Work place Dev

DTS

Existing Line

rail extension

terminal Dev
(commercial)

Housing Dev

Question(1)
Who's Job of Planning,
Standardization,
Capex by who?
Opex by who?
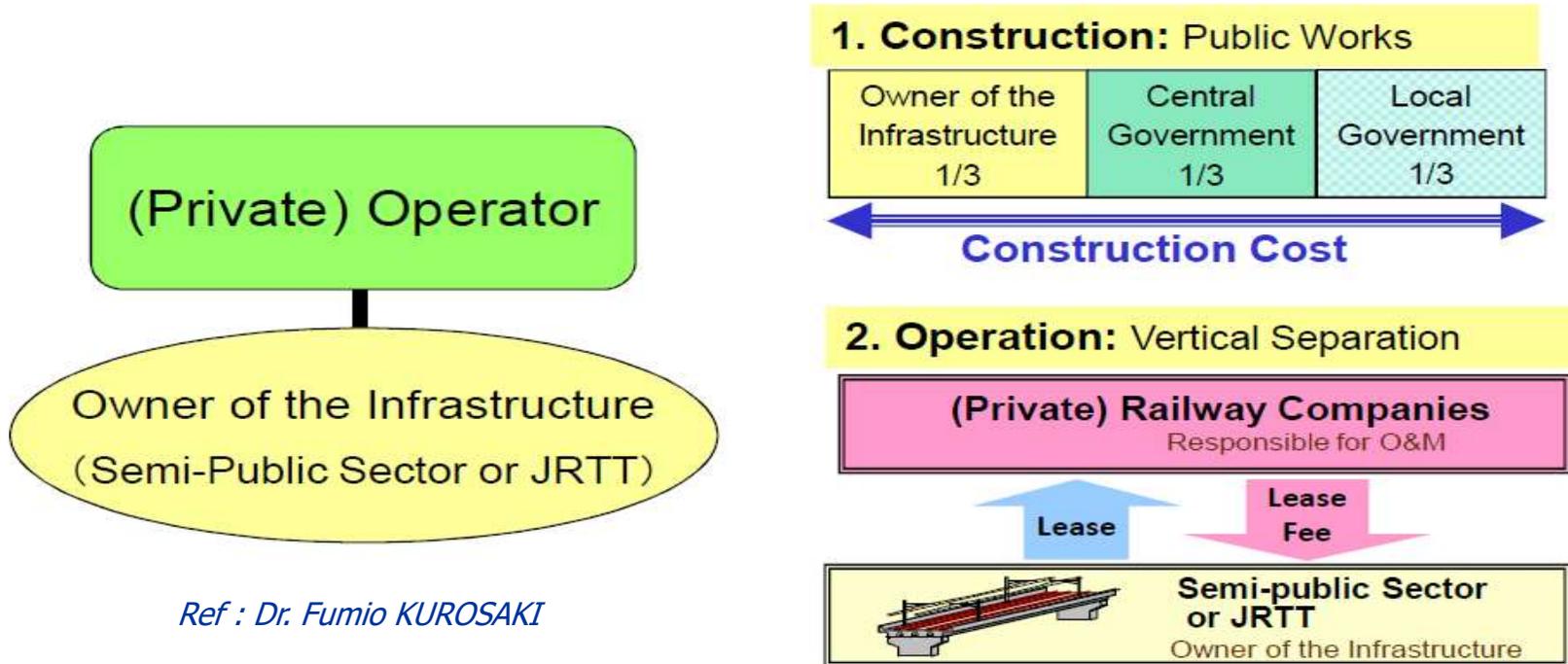**Revenue settlement rule?**

Question(2)
DTS (Japan model) to DMC?
How, what first?,
What's the Gov's role,
Direct or non-direct subsidy?
(ADB) ODA's Role?

JR Re-structuring - Comments and Question(I)

Act on Enhancement of Convenience of Urban Railways

The act is valid for constructing missing links and terminal station facilities.

(Private) Operator

Owner of the Infrastructure (Semi-Public Sector or JRTT)

Ref : Dr. Fumio KUROSAKI

1. Construction: Public Works

Owner of the Infrastructure 1/3	Central Government 1/3	Local Government 1/3

Construction Cost

2. Operation: Vertical Separation

(Private) Railway Companies
Responsible for O&M

Lease → ← Lease Fee

Semi-public Sector or JRTT
Owner of the Infrastructure

23

Question(1) : Vertical Separation Vs. Integration
 to DMC, How, what transfer Japan model ?
 What's the Gov's role,
 (ADB) ODA's Role?

JR Re-structuring - Comments and Question(II)

Large-scale Private Railways' Revenue (Billion JPY)

Company	Transport Revenue	Subsidy	Revenue from the Affiliated Businesses [a]	[a]/ Total Revenue (%)
Tobu	156	0	65	29.3
Seibu	94	0	98	51.1
Keisei	53	0	8	12.8
Keio	78	0	23	22.6
Odakyu	108	0	51	31.9
Tokyu	122	0	162	57.1
Keikyu	66	0	48	42.3
Sotetsu	32	0	81	71.9

(Figure: FY 1996)

Source: " World City Tokyo Established by Railways" (Yajima, Ieda. et al., 2014)

Question(1) : Revenue from Affiliated Businesses

Capex(Infra) by who?
If Yes, is it not Subsidy?

User Pay Principle :
Generation conflict?
Fare control by fare-box?
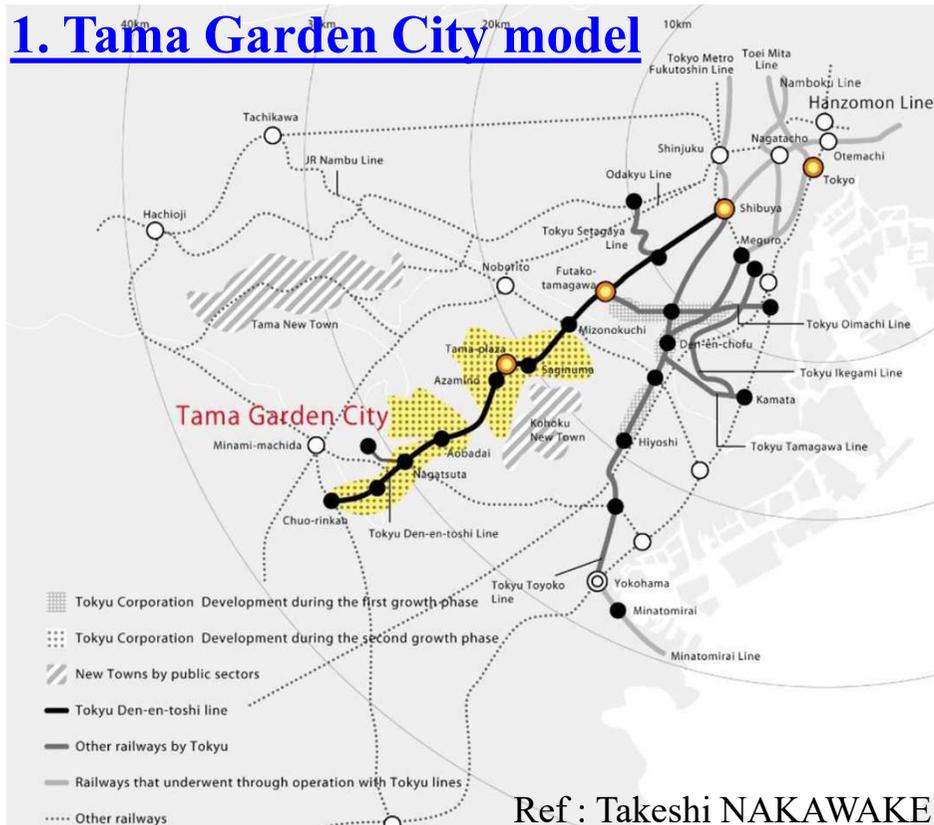
Question(2) : Revenue from Affiliated Businesses
to DMC, Japan model - How transfer? (Pre-requirement)
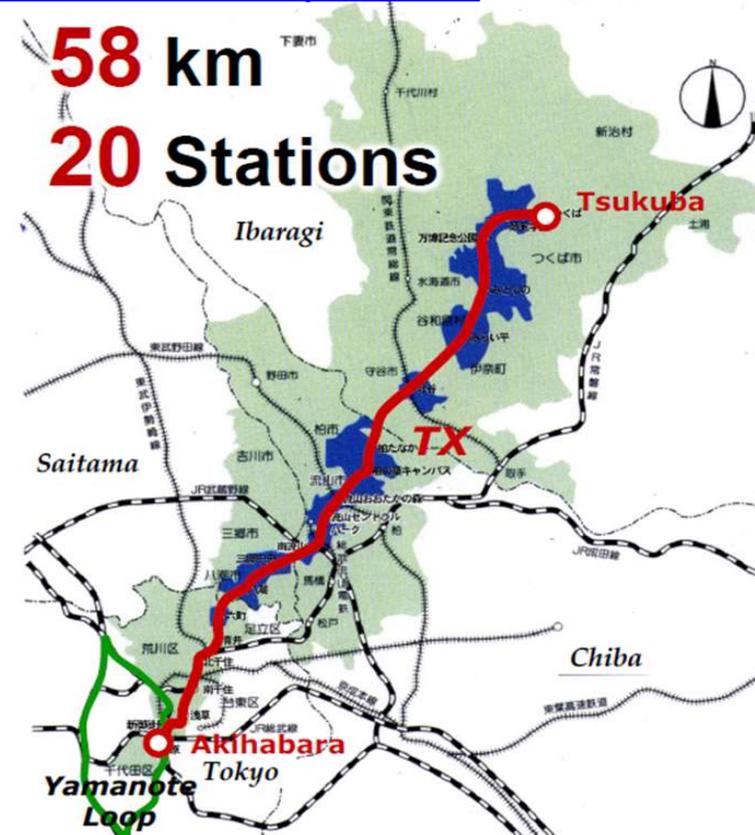What's the Gov's role ?, regulation
(ADB) ODA's Role ? Any comments?

How to get a World Class RAIL Transport System in place ?

1. Tama Garden City model

2. Tsukuba City model

Ref : Takeshi NAKAWAKE

Questions : What's the big different? , why new "law" ?
What's the Gov's role, ODA's Role?
to DMC, (Japan model) How transfer?
What is the " Pre- requirement"

LVC - Comments and Question(IV)

A. Which Project, First?

 1) New line or Existing lines Area?

B. Capacity Building Issues

 1) Institutional reformation,

 2) Financing agenda

What is the ADB's Role ?
→ Any Proposal ?

Discussion : Next Step

I. What did we learn ? (Network/ DTCS / TOD&LVC, others)

II. Which one first, transfer to DMC, what & how adjust

III. If ADB-TA try,

1. What contents ?
Institutional / Governance / Special Act
2. The most difficult task to overcome
3. T-Infra + Landuse, TWG – Join?
4. Others..

IV. Next step , … … Any others?