Presentation for Panel Discussion

Atsushi FUKUDA
Prof. of Nihon University

14 Jan. 2020, Bangkok

Necessity of M-MAP2 to meet with future urban structure of Bangkok and social situation in Thailand

BANGKOK URBAN AREA

Khlong Luang

Pathum Thani

Nakhon Pathom

Lam Luk Ka

Nonthaburi   Pak Kret

Necessity of M-MAP2 to meet with future urban structure of Bangkok and social situation in Thailand

Sam Phran

Bangkok

Bangkok, Thailand

Samut Prakan

Samut Sakhon

Mueang Samut Prakan

Mueang Samut Sakhon

© 2012 Tele Atlas

US Dept of State Geographer

Figure 2

Fundamental Idea of Future Mass Transit Corridors

In JICA Preparatory Study for M-MAP2 Blue print, Draft Proposal was discussed and identified based on the following planning considerations:

- **To promote future regional structure plan**

- **To support development of CBD and sub-centers**

- **To meet with future demand-supply gap by direction**

- **To improve the traffic efficiency and railway coverage area in the City Center**
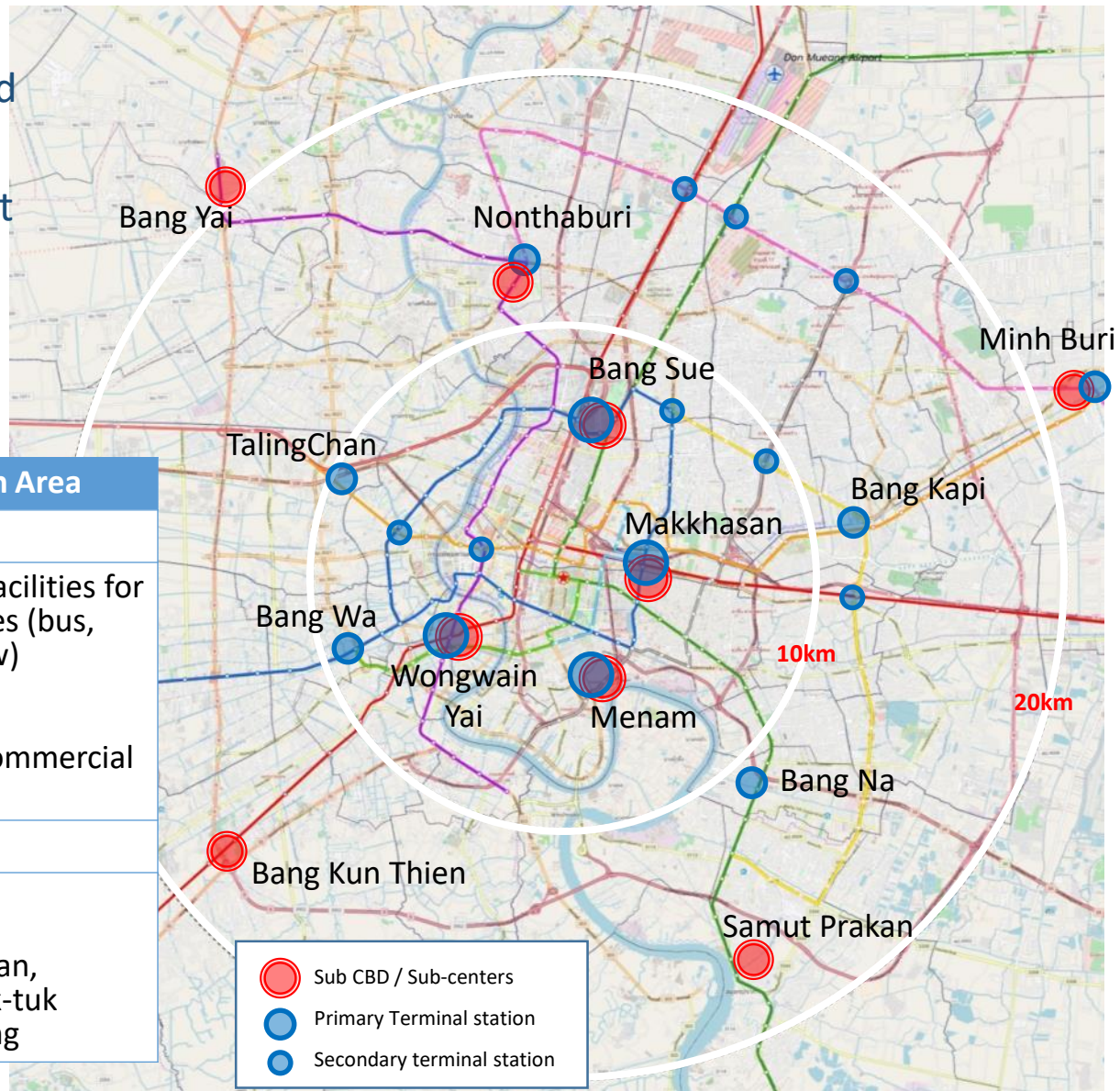
Mass transit lines should connect to link sub-centers

BMR Structural Plan by DPT (preliminary draft)
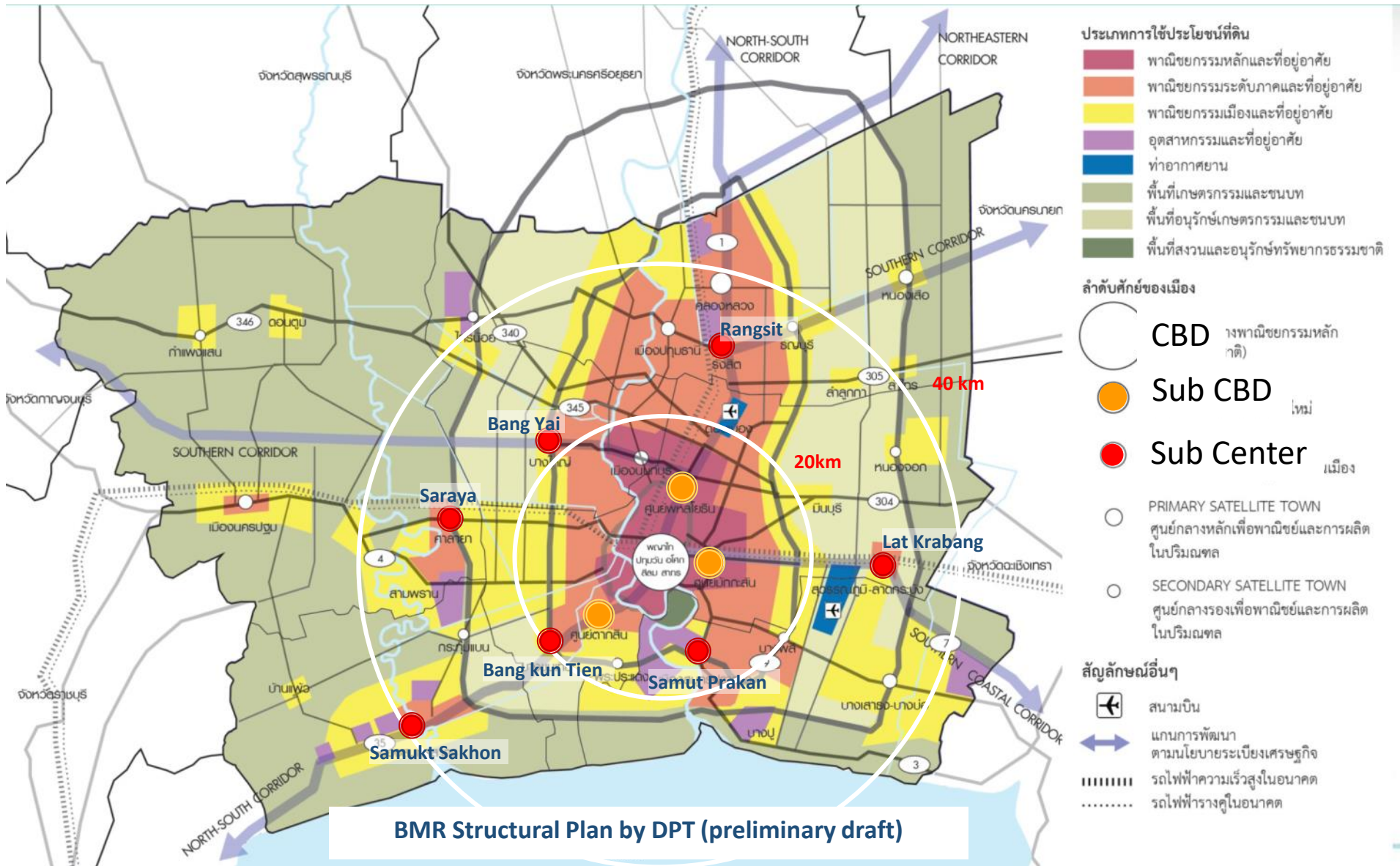
■ Also, mass transit lines should connect to transport terminals in CBD

➢ To ensure smooth transfer among mass rapid corridors and with other transport modes.

➢ To promote urban development at transit terminals and sub-centers.
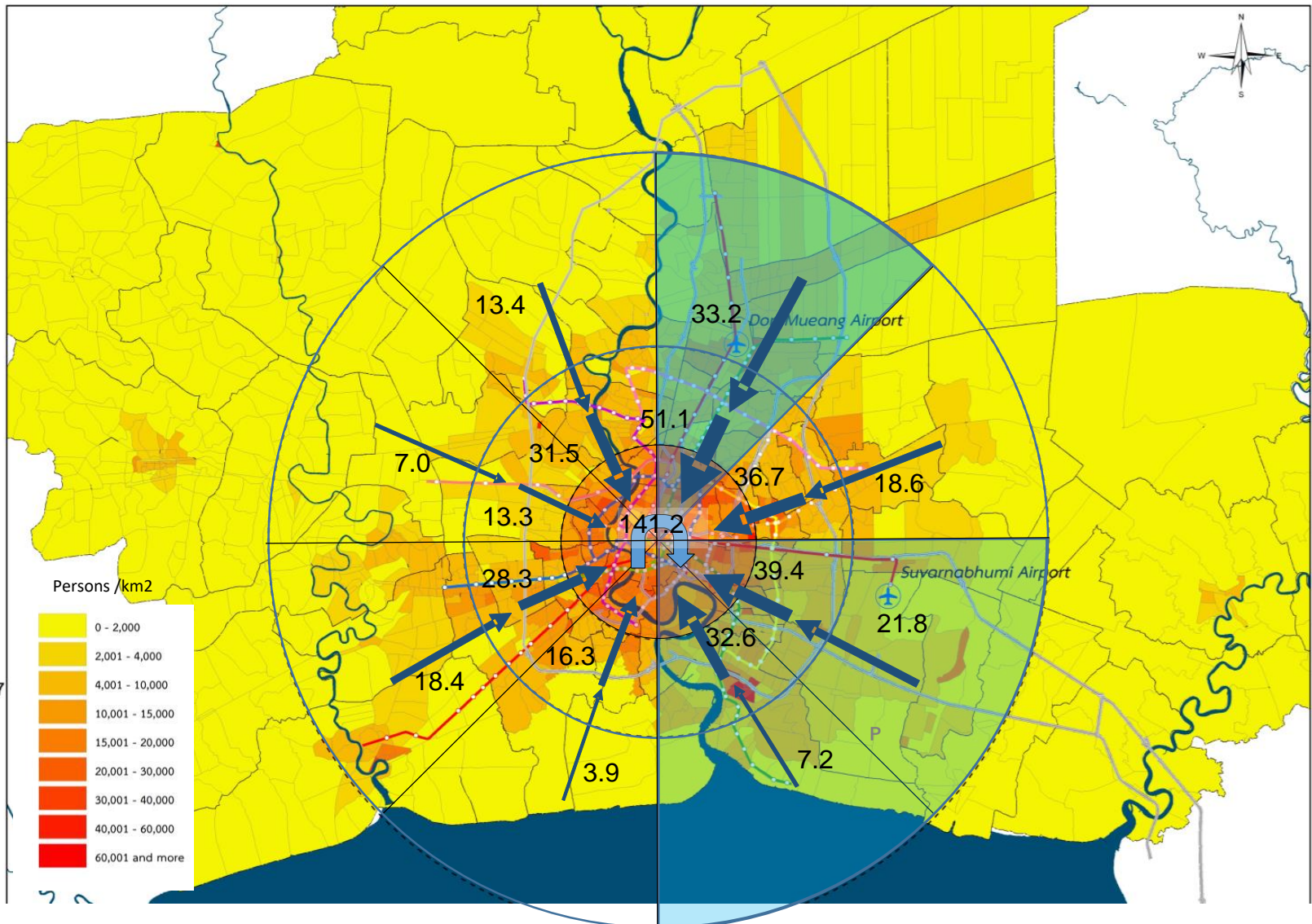
Typical Terminal Facilities

CBD	Sub-urban Area
Primary terminals	
• Easy transfer among railway lines • Integration with the surrounding commercial/ office buildings • Feeder service station (bike-taxi)	• Inter-modal facilities for feeder services (bus, van, songteaw) • Park and Ride • Kiss and Ride • Large-scale commercial facilities
Secondary terminals	
• Easy transfer among railway lines • Feeder services (bike-taxi)	• Park and Ride • Kiss and Ride • Bay for bus, van, songteaw, tuk-tuk • Small shopping

Legend:
- ● Sub CBD / Sub-centers
- ● Primary Terminal station
- ● Secondary terminal station

Map labels: Bang Yai, Nonthaburi, Minh Buri, Bang Sue, TalingChan, Bang Kapi, Makkhasan, Bang Wa, Wongwain Yai, Menam, Bang Na, Bang Kun Thien, Samut Prakan, 10km, 20km

(C) Mr. FUKUDA Atsushi, Japan Transport and Tourism Research Institute, 2020

■ To meet with future demand-supply gap by direction

Population Density (2027)

13.4

33.2 Don Mueang Airport

51.1

7.0

31.5

36.7

18.6

13.3

141.2

28.3

39.4 Suvarnabhumi Airport

21.8

16.3

32.6

18.4

3.9

7.2

Persons /km2

	0 - 2,000
	2,001 - 4,000
	4,001 - 10,000
	10,001 - 15,000
	15,001 - 20,000
	20,001 - 30,000
	30,001 - 40,000
	40,001 - 60,000
	60,001 and more

27

P

Source: JICA Study Team (based on e-BUM)

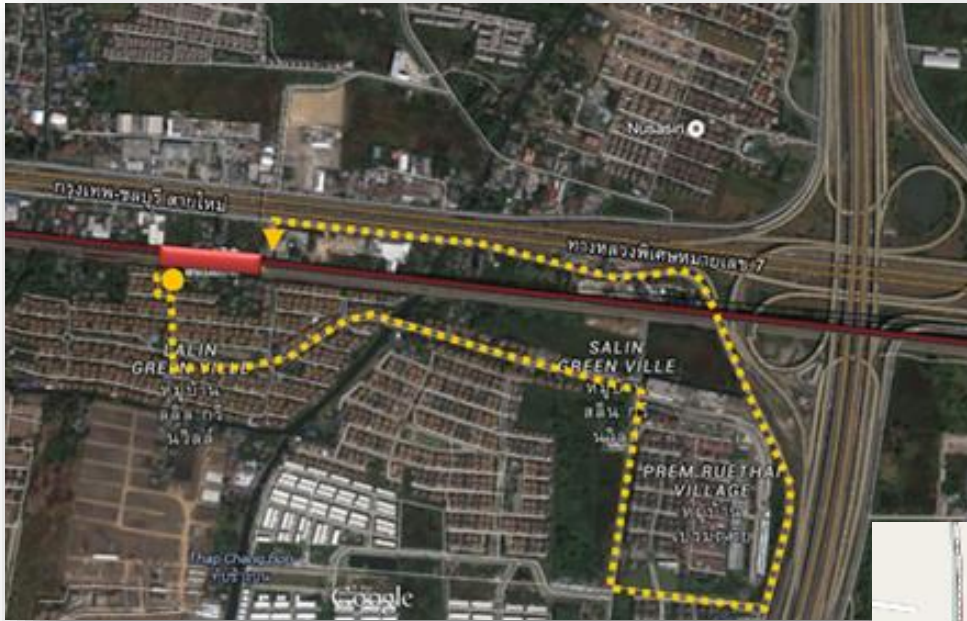# To improve the traffic efficiency and railway coverage area in the City Center

➢ Additional railway lines to serve for the railway-missing areas in the City Center
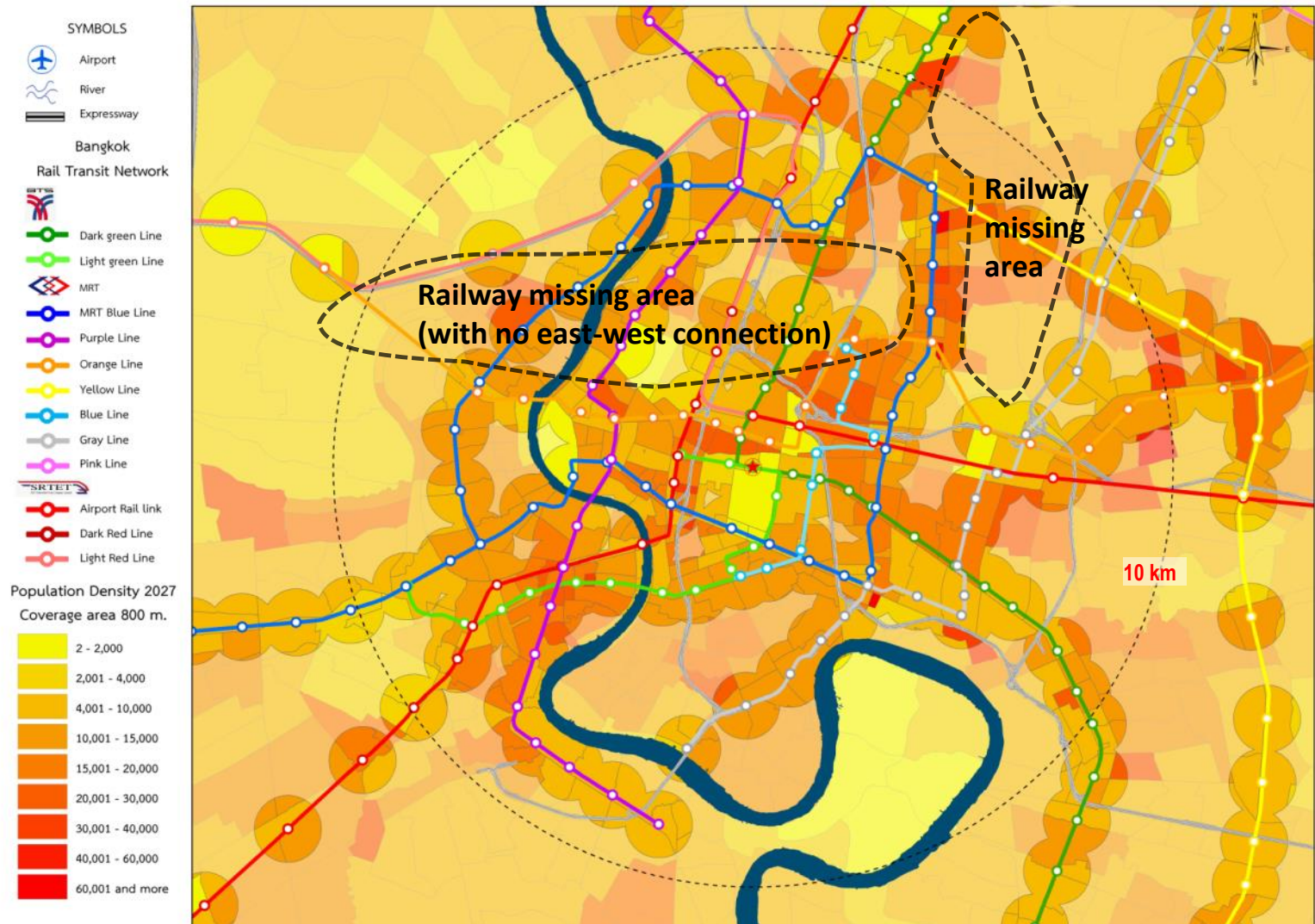
Problems at railway stations and surroundings
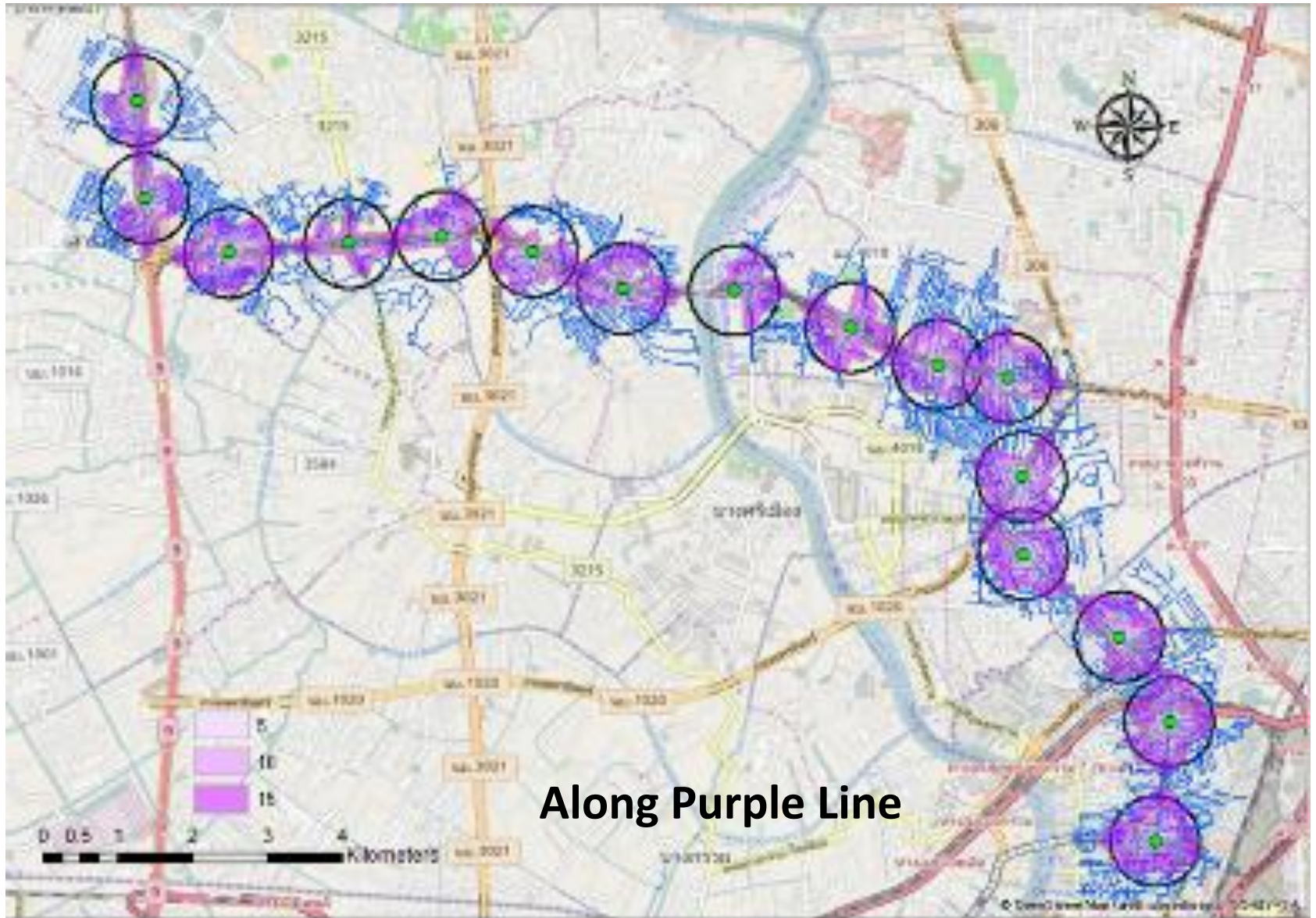
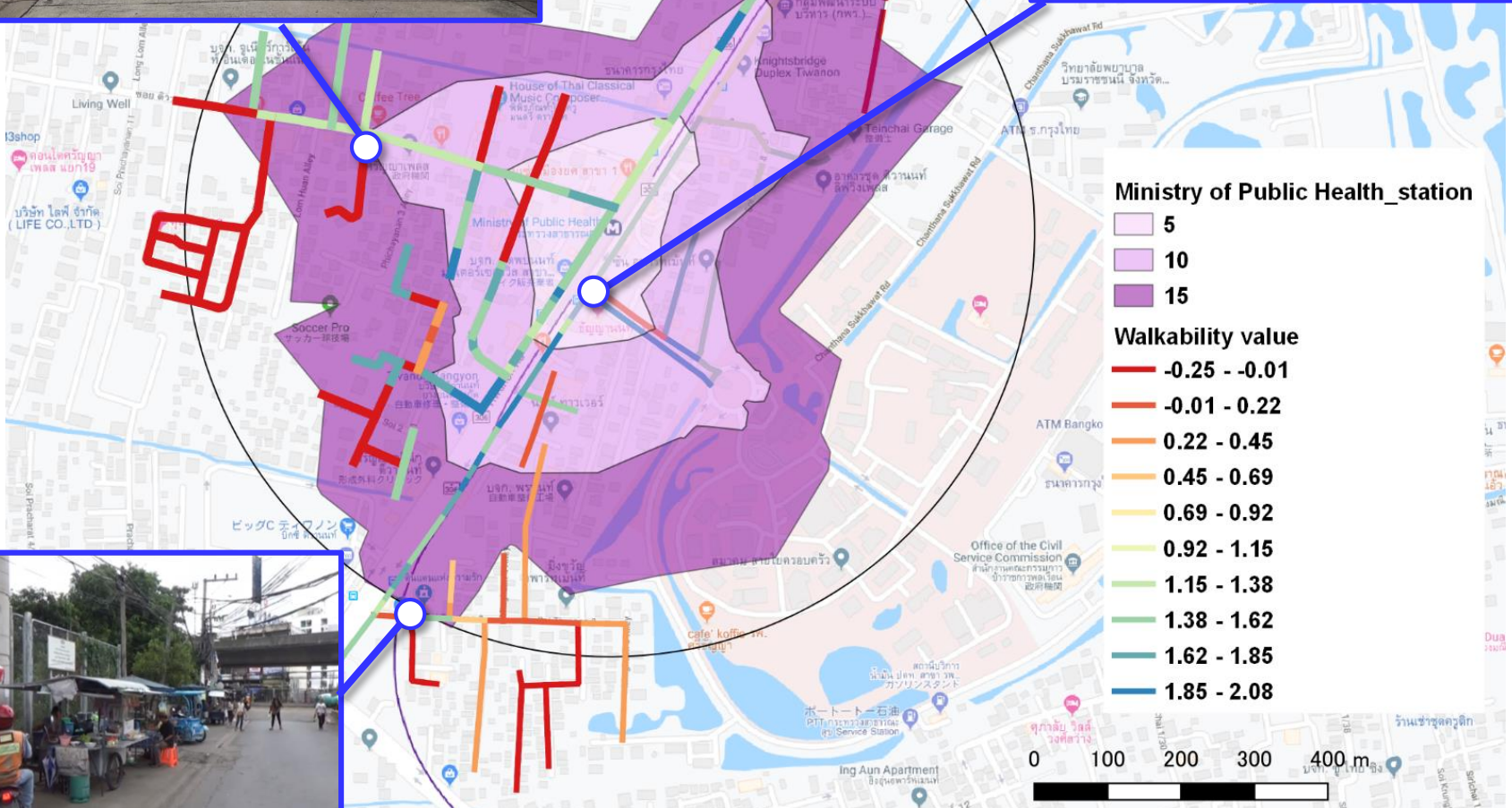# ■ Very poor accessibility to the railway station

Ban Thap Chang Station

15 min.

10 min.

5 min.

400 m

The range to access the station is quite limited

■ Very poor accessibility to the railway station

Along Purple Line

■ Walkability near the railway station (Ministry of Public Health)

Ministry of Public Health_station
- 5
- 10
- 15

Walkability value
- -0.25 - -0.01
- -0.01 - 0.22
- 0.22 - 0.45
- 0.45 - 0.69
- 0.69 - 0.92
- 0.92 - 1.15
- 1.15 - 1.38
- 1.38 - 1.62
- 1.62 - 1.85
- 1.85 - 2.08

0   100   200   300   400 m

■ Walkability near the railway station (Comparison)

<Ban Thap Chang>

<Kozunomori>

<Yaek Tiwanon>

<Ogi-Ohashi>

(C) Mr. FUKUDA Atsushi, Japan Transport and Tourism Research Institute, 2020
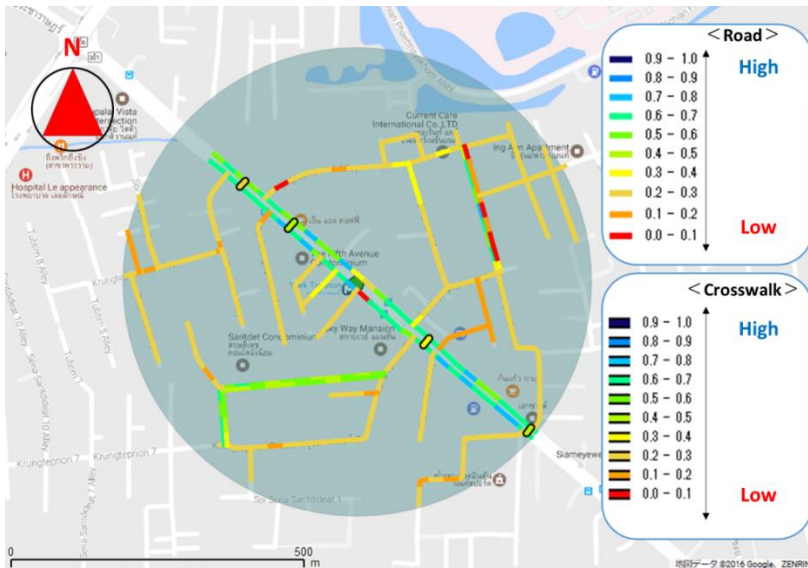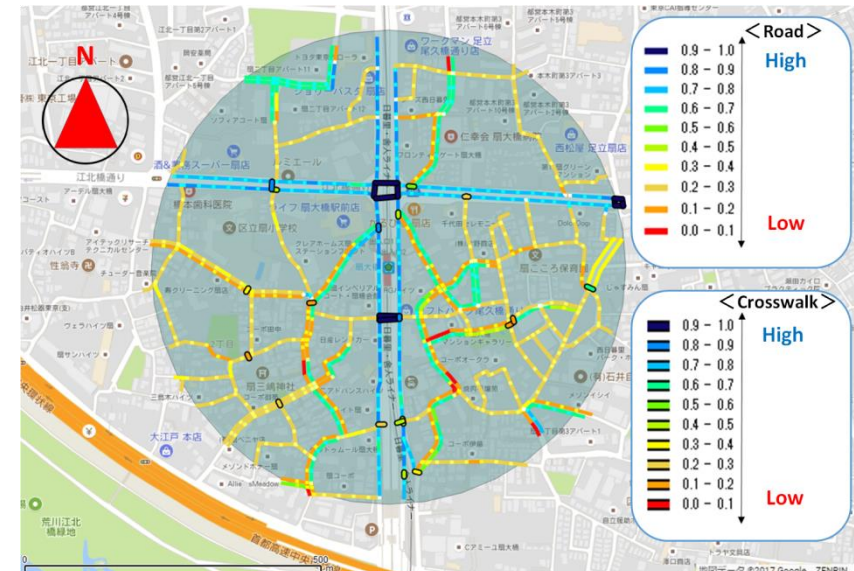
Access by Park & Ride along Purple Line

Legend:
- Yaek Nonthaburi 1 User
- Sam Yaek Bang Yai User
- khlong Bang Phai User
- Bang Rak Yai User
- Purpleline Station
- Purple Line
- Circle R=5Km

0 1 2 4 6 8 km

(C) Mr. FUKUDA Atsushi, Japan Transport and Tourism Research Institute, 2020
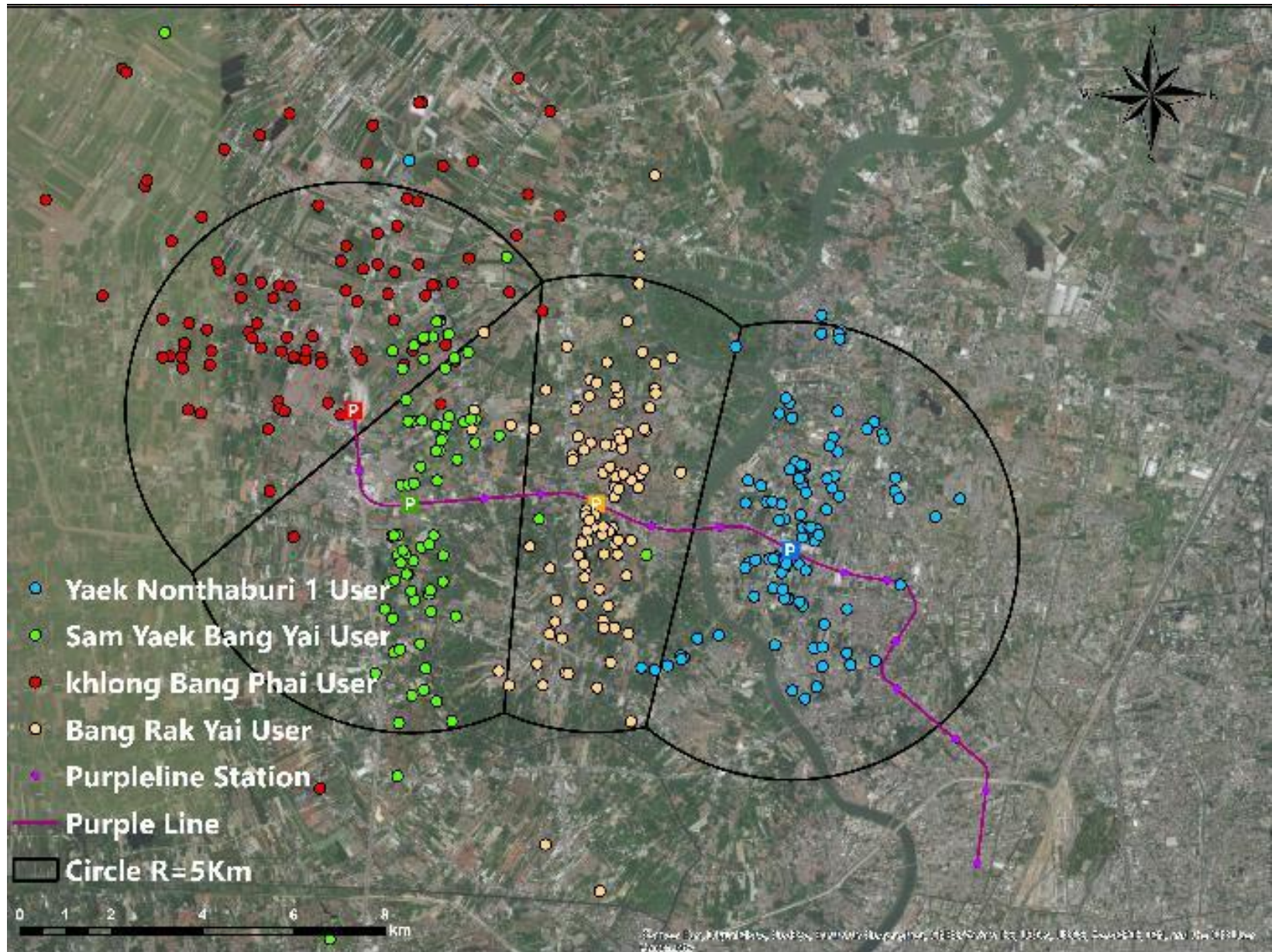
■ Possibility to develop at the railway station area
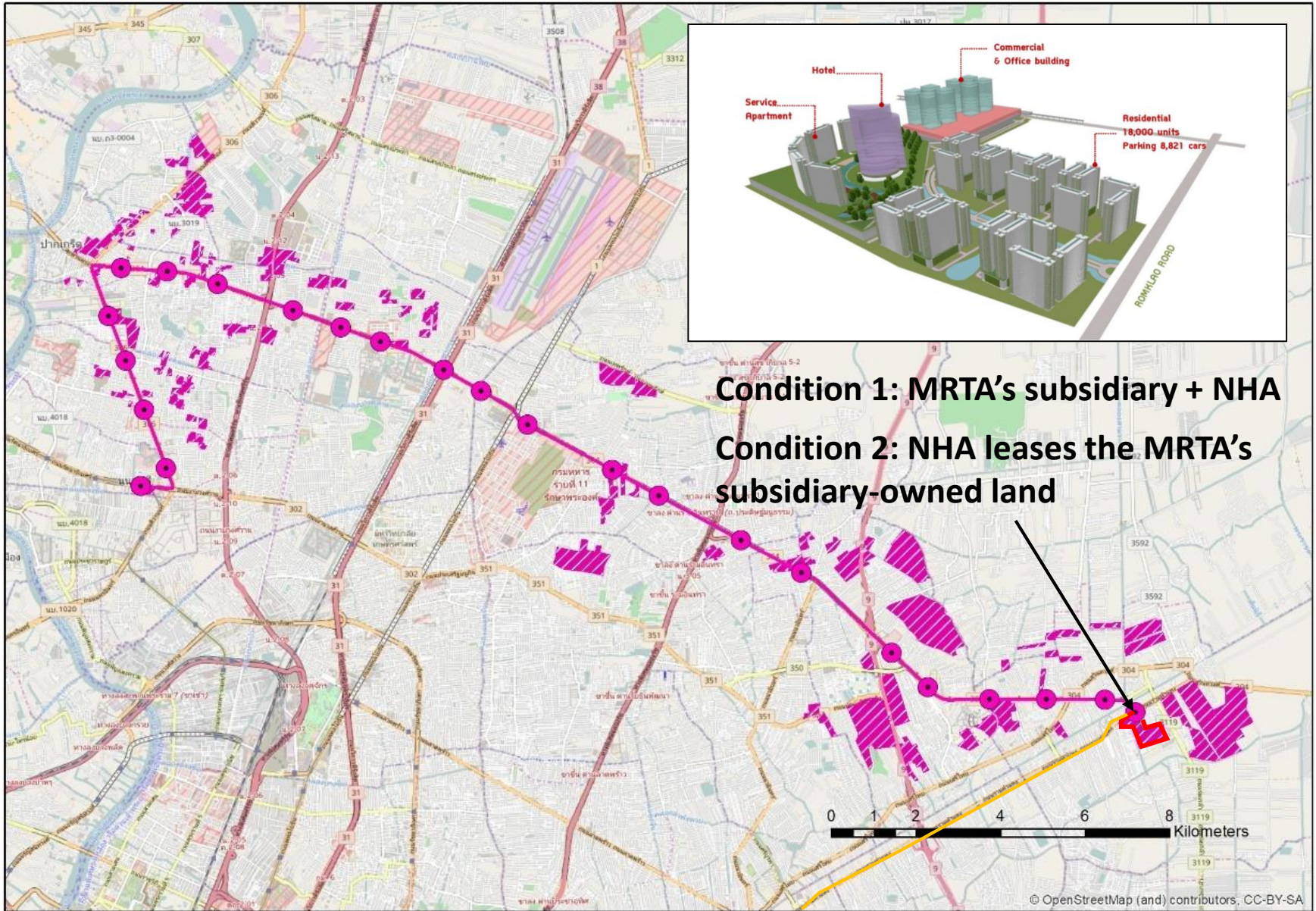
Condition 1: MRTA's subsidiary + NHA

Condition 2: NHA leases the MRTA's subsidiary-owned land

Proposal of ideal form of Department of Railway Engineering including its role

Based on experience of M-MAP2 Blue print study, establishment of urban railway planning and evaluation process including demand forecasting method

- **Existing demand forecasting study mainly focused to road transport.**

- **In particular, it is important to establish a framework that can evaluate service levels such as fare levels and operating frequencies.**

- **It manages the entire railway as a network, enhances the connectivity of each railway, and has the role of ensuring user convenience by making it seamless.**

- **Establish a methodology to promote railway development in cooperation with other related organizations**