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Republic of Indonesia**

**JABODETABEK Urban Transportation
Policy Integration Project Phase 2
in the Republic of Indonesia**

Project Completion Report

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Abbreviations

ABM	Activity-Based Model
ADS	Activity-Travel Diary Survey
AGT	Automated Guideway Transit
<i>Angkot</i>	<i>Angkutan Kota (Paratransit)</i>
ATR/BPN	Agrarian Affairs and Spatial Planning
BAPPENAS	National Development Planning Agency (<i>Badan Perencanaan dan Pembangunan Nasional</i>)
BAPPEDA	Regional Development Planning Agency in local governments (<i>Badan Perencanaan Pembangunan Daerah</i>)
BBPJN	National Road Implementation Agency (<i>Balai Besar Pelaksanaan Jalan Nasional</i>)
BKSP	Development Cooperation Agency (<i>Badan Kerja Sama Pembangunan</i>)
BLU	Public Service Body (<i>Badan Layanan Umum</i>)
BRT	Bus Rapid Transit
BUMD	Local Government-Owned Enterprise
BUMN	State-Owned Enterprise
CMEA	Coordinating Ministry for Economic Affairs
C/P	Counterpart
CTS	Commuter Trip Survey
BPTJ	Greater Jakarta Transportation Authority
DAC	Development Assistant Committee
DBPR	Building and Spatial Plan Agency (<i>Dinas Bangunan dan Penataan Ruang</i>)
<i>Dishub</i>	Transportation Agency in local government (<i>Dinas Perhubungan</i>)
<i>Dispenda</i>	Revenue Department of local government (<i>Dinas Pendapatan</i>)
DKI Jakarta	Jakarta Special Capital Province (<i>Provinsi Daerah Khusus Ibukota Jakarta</i>)
EC	Executing Committee
ERP	Electronic Road Pricing
GIS	Geographic Information System
GOI	The Government of the Republic of Indonesia
GOJ	The Government of Japan
GDP	Gross Domestic Products
GDRP	Gross Regional Domestic Products
GPS	Global Positioning System
IC	Integrated Circuit
ITF	Intermodal transfer facility
JABODETABEK	Jakarta, Bogor, Depok, Tangerang, and Bekasi
JCC	Joint Coordinating Committee
JICA	Japan International Cooperation Agency
JR	Japan Railway Company Group
JTA	JABODETABEK Transportation Authority
JUTPI	Project for JABODETABEK Urban Transportation Policy Integration

JUTPI-MP	JABODETABEK Urban Transportation Master Plan revised by the Project for JABODETABEK Urban Transportation Policy Integration
<i>Kab (Kabupaten)</i>	District or Regency
KCIC	<i>Kereta Cepat Indonesia China</i> (high speed train)
<i>Kota</i>	City
LRT	Light Rail Transit
MLIT	Ministry of Land, Infrastructure, Transport and Tourism of Japan
MOT	Ministry of Transportation
MP	Master Plan
MPA	Metropolitan Priority Area for Investment and Industry in JABODETABEK Area
MRT	Mass Rapid Transit
NJKP	Taxable Sales Value (<i>Nilai Jual Kena Pajak</i>)
NJOP	Tax Object Sales Value (<i>Nilai Jual Objek Pajak</i>)
OD	Origin-Destination
OECD	Organization for Economic Co-operation and Development
PAPI	Paper and Pencil Interview
PDM	Project Design Matrix
PINA	Non-Government Budget Equity Financing
PKLH	City Arrangement Bureau (<i>Biro Penataan Kota dan Lingkungan Hidup</i>)
PO	Plan of Operation
PPP	Public-Private Partnership
PSO	Public Service Obligation
PUPR	Public Works and Spatial Planning Agency (<i>Dinas Pekerjaan Umum dan Penataan Ruang</i>)
PWU	Project Working Unit
PT. Jakpro	PT. Jakarta Propertindo, DKI Jakarta Local Government-Owned Enterprise (BUMD)
PT. KAI	State-Owned Railway Company (<i>PT. Kereta Api Indonesia (Persero)</i>)
PT. KCJ	Subsidiary company of PT. KAI for commuter railway in JABODETABEK (<i>PT. KAI Commuter JABODETABEK</i>)
PT. KCI	PT. <i>Kereta</i> Commuter Indonesia, subsidiary company of PT. KAI for commuter railway in JABODETABEK, previously known as PT. KCJ
PT. MRTJ	PT. MRT Jakarta, DKI Jakarta Local Government-Owned Enterprise (BUMD)
R/D	Record of Discussion
RITJ	JABODETABEK Transportation Master Plan
SC	Steering Committee
SITRAMP	The Study on Integrated Transportation Master Plan for JABODETABEK
TDM	Transportation Demand Management
TOD	Transit-Oriented Development
TOR	Terms of Reference

Chapter 1 Background

1.1 Background and Role of the Project

The Government of Indonesia and JICA have continuously implemented the cooperation of urban transportation sector in JABODETABEK through various projects. "The Study on Integrated Transportation Master Plan for JABODETABEK (SITRAMP)" (Phase 1 and Phase 2) was conducted by joint effort between BAPPENAS and JICA from 2001 to 2004 and formulated the urban transportation master plan called as "SITRAMP". This Master Plan proposed the Bus Rapid Transit (BRT), which is in operation (currently consisting of 13 BRT corridors), and the Mass Rapid Transit (MRT), which was constructed with a financial support by Japanese Yen Loan and is currently in operation for phase 1 (Lebak Bulus - Bundaran HI). Moreover, "JABODETABEK Urban Transportation Policy Integration Phase 1 Project (hereinafter referred to as "JUTPI 1") was conducted to update SITRAMP and to support the establishment of JABODETABEK Transportation Authority (hereinafter referred to as "JTA") by joint-effort between CMEA and JICA from 2009 to 2012. The JUTPI 1 project continue by the JUTPI 2 As the result of the project, the Greater Jakarta Transportation Authority/*Badan Pengelola Transportasi JABODETABEK* (BPTJ), which is the original form of JTA, were established under MOT by the Presidential Regulation No.103 Year 2015 and the Ministry of Transportation Regulation No.3 Year 2016.

The establishment of BPTJ then followed by the issuance of the JABODETABEK Transportation Master Plan/*Rencana Induk Transportasi JABODETABEK* (RITJ) under the Presidential Regulation No. 55 Year 2018. Since implementation of the RITJ requires strong coordination between regions in JABODETABEK, capacity development of the implementation agencies and cooperation among transportation related organizations in JABODETABEK is considered important.

JABODETABEK Urban Transportation Policy Integration (JUTPI) Project Phase 2 aims to

develop the function of administrative institutions of the urban transport system by promoting capacity development and cooperation among urban transportation related organizations in JABODETABEK to contribute to the development of the public transportation system by 1) detailing the RITJ; 2) enhancing capacity of urban transportation related agencies to implement transportation projects in JABODETABEK through implementation of pilot projects; and 3) enhancing capacity of urban transportation related agencies to implement TOD Model Projects in JABODETABEK.

1.2 Current Situation

(1) Transportation Problems in JABODETABEK

Indonesia continues to enjoy steady economic development with 6 % annual growth rate. The Jakarta Metropolitan Area (JABODETABEK) as the growth center has its share roughly 10% of the national population (237.64 million in 2010 census), 30% of the economic production to the total GDP and 40% of the foreign investment from abroad. These rapid economic growths accelerate the surge in the number of motorcycle and car in the region. Registration number of the motorcycle and car in the area increased 4.64 times in motorcycle and 2.01 times in car from the year 2000 to 2010.

While the transportation in JABODETABEK heavily relies on road transportation (almost 98%), the surge in the number of motorized vehicle for private use is tremendous resulting in the reduction in the use of public transport (public transport share in 2010 is reduced to 19.7% from the rate of 57% in 2002) and increasing the number of workers/students that commute from the neighboring regions (number of workers that commute from neighboring region in 2010 is 1.5 times more than that in 2002). This is worsening the traffic congestion in the region and is causing huge economic loss. This situation has brought the necessity of urgent implementation of the public transportation system and integrated transportation strategy for transportation modes and avoidance of the concentration to the Jakarta.

(2) JUTPI 1 and Its Progress

The central and local governments in the JABODETABEK region have made efforts to develop transportation system to alleviate traffic congestion in the urbanized area. In

2011 the JABODETABEK Urban Transportation Policy Integration Phase 1 (hereinafter referred to JUTPI 1) prepared the urban transportation master plan for the target year 2030. JUTPI 1 recommended variety of policy measures to tackle with urban transportation problems in the region. They include not merely transportation facility developments but also regulatory framework, fund raising mechanism and transportation institutional set up. In order to understand causes of delay in implementation, it is of great importance to understand the progress of the proposed projects and programs by JUTPI 1.

Table 1 Progress of JUTPI 1 Proposed Projects by Transportation Sectors

Sector	A	B	C	Total
Road Network Development	23	12	8	43
Improvement on Traffic Control System & Demand Management	3	7	2	11
Bus Transportation System	3	8	0	11
Railway System Development	2	19	16	37
Improvement of Transportation Safety & Security	0	2	0	2
Environmental Betterment	3	1	0	4
Measures in Urban Planning	0	2	1	3
Institutional Setup & Reform	0	2	2	4
Financial Arrangement	0	1	3	4
TOTAL	34	54	32	120
%	28%	44%	27%	100%

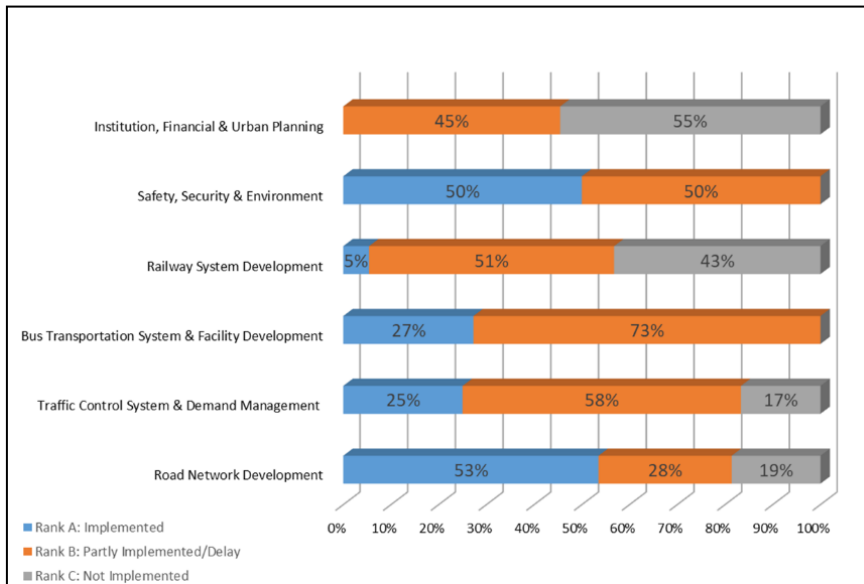
Source: JUTPI 2

Note: **A:** Project Implemented, **B:** Project Partly Implemented/Delay, **C:** Project Not Implemented.

The progresses of several projects proposed by the JUTPI 1 are behind the original schedule due to lack of regulatory framework to discuss and to decide priorities of projects which cover several sectors and/or several local governments, lack of coordination as well as financing/budgeting issues. Since transportation system planning from the viewpoint of a single metropolitan area is essential, the regulatory and institutional framework for urban transportation was proposed in the JUTPI 1.

In principle, delays that have occurred since the implementation of JUTPI 1 were due to the absence of a cross-border organization (both cross-regional and cross-organizational)

that has a main role in coordinating the planning and implementation of transportation-related projects. Then, JTA (JABODETABEK Transportation Authority) was proposed in JUTPI 1, and in its development was changed to BPTJ even though the scheme was different from JTA.



Source: JUTPI 2

Figure 1 Progress of JUTPI 1 Proposed Projects

Progress of the short-term projects recommended to be implemented by 2015 in JUTPI 1 was categorized in three categories of rank; Rank A: implemented as scheduled, Rank B: partly implemented/implemented with some delay, Rank C: not implemented. Only 28% of the projects proposed by JUTPI 1 have been implemented on schedule and 44% of the proposed projects have been partly implemented or implemented with some delay, and 27% of the proposed projects have not yet implemented.

One of the reasons behind the delay in realizing the project proposed by JUTPI 1 is the lack of a framework for formulating an implementation plan based on the consensus of the project priorities among multiple local governments involved in the project. JABODETABEK, which consists of two levels of governments (Provincial Government and *Kota/Kabupaten* Government), has resulted in a coordination problem in terms of development planning particularly related to transportation system development, including the difficulty in reaching a consensus among the three provincial governments.

Thus, coordination meetings among officers of provinces and *Kota/Kabupaten* in the metropolitan area might have concluded with compromised options that nearly deviated from the original plans. In order to develop metropolitan-wide urban transport, it is necessary to formulate a transport system development plan from the perspective of JABODETABEK and make adjustments for its implementation. Therefore, improvements need to be focused in equalizing perception and consensus, which is the main task of the current transportation authority, namely, BPTJ

(3) Role of the Project

In order to solve the above-mentioned urban transportation problems and further diffuse the output of JUTPI 1, JABODETABEK Urban Transportation Policy Integration (JUTPI) Project Phase 2 aims to develop the function of administrative institutions of the urban transport system by promoting capacity development and cooperation among urban transportation related organizations in JABODETABEK to contribute to the urban development in the public transportation system by 1) detailing the RITJ; 2) enhancing capacity of urban transportation related agencies to implement transportation projects in JABODETABEK through implementation of pilot projects; and 3) enhancing capacity of urban transportation related agencies to implement TOD Model Projects in JABODETABEK.

Chapter 2 Summary of the Project

2.1 Project Area

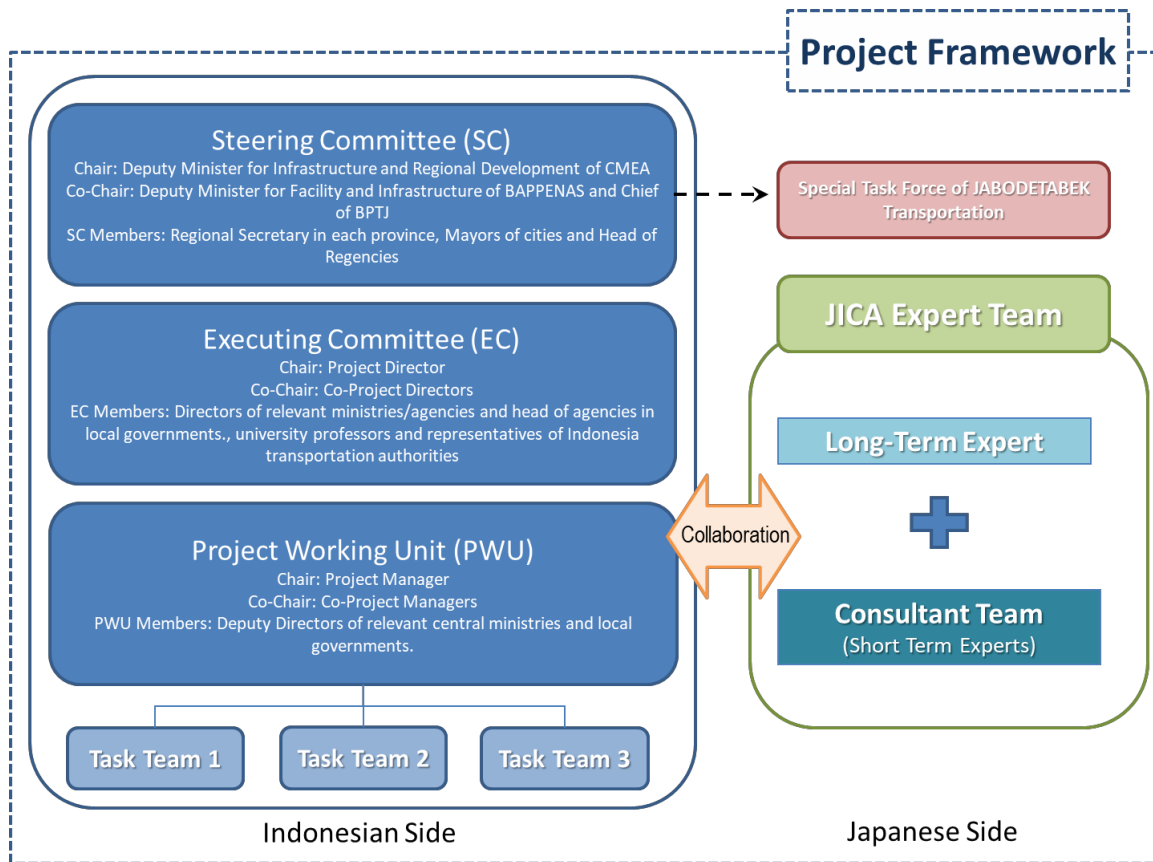
The project area of this study is Jakarta metropolitan area (JABODETABEK). The JABODETABEK area crosses the boundary of DKI Jakarta Province, West Java Province and Banten Province. The DKI Jakarta consists of five Kota: Kota Jakarta Pusat, Kota Jakarta Barat, Kota Jakarta Timur, Kota Jakarta Utara and Kota Jakarta Selatan. Except for DKI Jakarta Province, the JABODETABEK area consists of five local governments in the West Java Province; Kabupaten Bogor, Kota Bogor, Kota Depok, Kabupaten Bekasi and Kota Bekasi. JABODETABEK area also consists of three local governments in Banten Province; Kabupaten Tangerang, Kota Tangerang and Kota Tangerang Selatan.

2.2 Project Organization

Figure 2, the Steering Committee (S/C) is chaired by the Deputy Minister for Infrastructure Acceleration and Regional Development of the Coordinating Ministry for Economic Affairs (CMEA) and co-chaired by the Deputy Minister for Facility and Infrastructure of National Planning and Development Agency (BAPPENAS) and by the Director of the BPTJ. Executing Committee (E/C) consist of Project Directors level (CMEA, Directorate of Transportation of BAPPENAS, Planning Director of BPTJ).

Project Working Unit (PWU) and a Task Team (T/T) are under S/C and E/C. Main activities are performed mainly by this task team in which is not only the counterparts of the central government and related agencies of local governments but also local consultants and transportation operators participate including toll roads and public transport authority as necessary. The Joint Coordinating Committee (JCC) is held to coordinate across S/C and other organizations. On the other hand, long-term experts and short-term experts constitute a team on the Japanese side. Members of the Indonesian side (task teams) and the Japanese

side (long-term and short-term experts) collaborate to implement the project.



Source: JUTPI 2

Figure 2 JUTPI 2 Project Organization Framework

2.3 Objectives of the Project

The objective of the project is to develop the function of administrative institutions of the urban transport system by promoting capacity development and cooperation among urban transportation related organizations in JABODETABEK to contribute to the urban development in the public transportation system.

(1) Overall Goal

To promote urban development based on integrated public transportation system in JABODETABEK

(2) Project Purpose

To enhance institutional arrangement and capacity for improvement of urban transport-based system in JABODETABEK

2.4 Products of the Project

- Project Completion Report
- Annual Monitoring and Evaluation Report (AMER)

2.5 Plan of Operation and Results

The project was originally scheduled from July 2014 until July 2019. The project term was extended until October 31, 2019 based on the Record of Discussion (R/D) which was agreed on April 18, 2019. The original plan of operation and the result of activities are shown as follows.

Regarding output 1, detailing the RITJ, additional study items were organized taking into consideration the changing socioeconomic situation, transportation behavior changes in the JABODETABEK area, and the current status of planned transportation infrastructure development projects, and necessary survey and analysis were conducted. The established KPIs mentioned in the Presidential Decree number 55 of the year of 2018 are the basic indicators of the future urban transportation systems in JABODETABEK that were expected to be realized and the original projects and programs in RITJ are presumed to be and predisposed to achieving the KPIs.

For the purpose of detailing the RITJ, original projects and programs were tested and assessed. The future case over a significant number of testing suggested values that are far under what was listed in the KPI. The quick assessment of public transport assignment for the target year of 2035 also suggests the volume-capacity ratio that is far from sufficient over three main corridors with DKI Jakarta as the core of the movement. Scientifically proven, the current established network in RITJ requires quite a significant improvement to comprehend future transportation demand, and the JUTPI Phase 2 urban transportation master plan that includes significant improvements can be expected to fulfill the revised KPI as well as the future travel demand.

For output 2, to promote coordination of each agency in the region in terms of transportation issues, as well as improving the capacity of local government agencies related to the urban transportation sector at the planning, implementation, and evaluation stage, pilot projects were conducted. The pilot projects were focused on enhancing the capacity of agencies in Local Governments to implement transportation projects in JABODETABEK through the implementation of a small project that can improve public transportation usage. The important thing is not only to learn theories and cases, but also to develop practical skills through planning, implementation, and evaluation of actual pilot projects. Thus, the pilot project should be relatively small with the prospective benefit of the impact of promoting public transportation use observed by the public. Implementation of these pilot projects is expected to have the benefit of socialization and diffusing the impact to the full.

For output 3, to support the development of TOD appropriately, the case study of TOD model project in JUTPI 2 is expected to enhance the capacity of urban transportation-related agencies to implement Transit-Oriented Development (TOD) projects in JABODETABEK, which in turn will give a great benefit and impact for urban development in relation with the urban mass transportation system.

2.6 Summary of Activities

The following table shows the summary of activities. Details are shown in Chapter 3 Detailing the JABODETABEK Transportation Master Plan (RITJ), Chapter 4 Pilot Project Implementation, and Chapter 5 Enhancement of the Capacity to Implement TOD Project.

Table 2 Actual Achievements of Project’s Goal, Purpose and Outputs

Items	Indicators	Actual Achievements
<p>Overall Goal: To promote urban development based on public transport system in JABODETABEK</p>	<p>Adoption of urban transportation policies and project implementation in JABODETABEK urban transportation master plan.</p>	<ul style="list-style-type: none"> • Through the assistance in formulation of the detailed JABODETABEK urban transportation master plan, development of new corridors for mass transportation network (MRT and LRT) has been proposed.
<p>Project Purpose: To enhance institutional arrangement and capacity for improvement of urban transport-based system in JABODETABEK</p>	<ul style="list-style-type: none"> • Establishment of sustainable framework for cross-sectoral and cross-regional coordination of transportation issues in JABODETABEK • More than half of planned projects and TOD model projects to be implemented 	<ul style="list-style-type: none"> • Coordination forum as a framework for implementing cross-sectoral and cross-regional coordination has been established, as an example carried out in the pilot project activities. • JUTPI 2 Master Plan road show has been implemented and during the road show Transportation-related projects has been proposed by each <i>Kota/Kabupaten</i> to be included in the detailed JABODETABEK urban transportation master plan.

Items	Indicators	Actual Achievements
<p>Outputs:</p> <p>1. To develop a cross-ministerial and cross boundary framework to promote integrated urban transportation policies in JABODETABEK</p>	<p>1-1 Detailing the JABODETABEK urban transportation master plan.</p>	<ul style="list-style-type: none"> • Results of supplemental survey such as screen line survey, classified vehicle counting survey, and cordon line survey have been collected. • Result of existing ADS has been collected. • Result of economy and environmental loss through estimation method as well as evaluation indicators and targets of the socioeconomic benefits has been obtained. • Utilization of transportation planning software for transport demand and traffic simulation software.
	<p>1-2 Development of Annual Monitoring & Evaluation Report (AMER) of the JABODETABEK Urban Transportation Master Plan</p>	<ul style="list-style-type: none"> • Annual Monitoring & Evaluation sheet has already been formed. • Dissemination and capacity building for the relevant personnel (central and local government) to update the AMER periodically.
	<p>1-3 Establishment and maintenance of</p>	<ul style="list-style-type: none"> • Data from the survey on transfer bottleneck

Items	Indicators	Actual Achievements
	JABODETABEK urban transportation database	<p>between public transport lines has been collected.</p> <ul style="list-style-type: none"> • JABODETABEK urban transport database has been updated.
	1-4 Establishment of sustainable framework to promote urban transportation policies in JABODETABEK	<ul style="list-style-type: none"> • Policy measures to promote urban transportation projects and programs as listed in the master plan have been established.
2. To enhance capacity of urban transportation related agencies to implement transportation projects in JABODETABEK through implementation of pilot projects	2-1 To analyze urban transportation related policies of the related agencies in JABODETABEK.	<ul style="list-style-type: none"> • Roles of urban transportation-related organization have been identified. • Current urban transportation situation and issues in JABODETABEK have been identified.
	2-2 The number of the implemented pilot projects.	<ul style="list-style-type: none"> • Pilot projects activities in seven locations: DKI Jakarta, Kota Bogor, Kabupaten Bogor, Kota Depok, Kota Tangerang, Kota Tangerang Selatan & Kota Bekasi have been done and completed.
	2-3 Evaluation result of pilot projects and recommendation for sustainable implementation in future.	<ul style="list-style-type: none"> • User's interview survey and traffic counting and travel speed surveys in pre and post-project

Items	Indicators	Actual Achievements
		implementation have been implemented in each pilot project location in seven <i>Kota/Kabupaten</i> as an evaluation by using the evaluation index.
3. To enhance capacity of urban transportation related agencies to implement TOD projects in JABODETABEK	3-1 The number of reviewed policies regarding TOD.	<ul style="list-style-type: none"> • Results of urban transport policies related to the TOD and legal framework of urban development project have been analyzed. • Results of necessary policies and legal framework for implementation of large-scale urban redevelopment projects in station area have been analyzed.
	3-2 The number of TOD model project(s)	<ul style="list-style-type: none"> • Poris Plawad, a bus terminal in Kota Tangerang located on the south of Batu Ceper Station that serves airport train and commuter train, has been chosen as a case study of TOD Model Project.
	3-3 Evaluation result of TOD model project(s) and recommendation for sustainable in future	<ul style="list-style-type: none"> • Lessons learned and recommendations from TOD model project, including proposals on policies or urban

Items	Indicators	Actual Achievements
		development, transport and TOD.

Source: JUTPI 2

In the implementation of JUTPI 2, items of the project such as overall goal, project purpose and project outputs were reviewed based on each actual achievement for the evaluation. The aim is to determine the relevance and fulfillment of project's objectives, efficiency, effectiveness, impact, and sustainability. It is expected that, through evaluation of successful or unsuccessful achievement of the indicators, the valuable information is generated. If properly fed back, it could improve similar processes in the future.

2.7 Input of the Project

The input of the project is summarized as follows. Details about the expert dispatch and project office are shown in another section.

Table 3 Summary of JUTPI 2 Input

Japanese Side	Indonesian Side
Expert dispatch	
Long-Term Experts: Project Leader	Selecting the counterpart staff, Project Director, Project Manager
Consultant Team: Total 11 experts, 56.1 man-months	
Training in Japan: 7 (seven) times, 106 participants in total	
Equipment: Transportation planning software, Database management system software, Geographic Information System Software, digital satellite image, laptop.	

Source: JUTPI 2

2.7.1 Experts

(1) Long-Term Experts

1. Team Leader/Urban Transportation Policy Advisor

Name: Junkichi KANO

Duration of Assignment: July 2017 - October 2019, Year, Total 28-man month

Summary of Activities:

The expert managed the whole project and in charge of following activities.

1-1 To establish the Steering Committee (SC), Executing Committee (EC), Project Working Unit (PWU) and Task Teams.

1-6 To establish and enhance sustainable framework for cross-sectoral and cross-regional coordination of transportation issues in JABODETABEK.

1-7 To formulate policy development plan for specific issues necessary to achieve the goal of master plan.

2-1 To analyze urban transportation related policies of the related agencies in JABODETABEK.

2-2 To establish and update the implementation mechanism for pilot projects including a

method of selection, implementation support and evaluation considering relevant urban transportation policies of related agencies in JABODETABEK.

2-3 To implement the pilot projects

2-4 To evaluate the result of pilot projects

2-5 To develop recommendation containing lesson learnt from the result of the implementation of pilot projects.

3-1 To analyze TOD-related policies of related agencies in JABODETABEK.

3-2 To review existing TOD related laws and regulations of related agencies in JABODETABEK and prepare necessary modification and outlines of new laws.

3-3 To prepare and update implementing plan of TOD model project (i.e. survey, financial source and evaluation).

3-4 To identify demarcation among ministries/organization concerned and support necessary organization by CMEA for necessary legislation.

3-5 To strengthen the institutional development capacity to implement the TOD model project.

3-6 To conduct (some stages of) implementation of the TOD model project.

3-7 To evaluate the result of the TOD model project.

3-8 To develop recommendation containing lesson learnt from the result of the implementation of TOD model project.

A summary of the activities of the Expert is show below.

Table 4 Summary of Activities of the Transportation Coordination Advisor

Location	No.	Activities	Summary of Activities
Preparation	A	Information collection and Preparation	Information and data required for the project were collected. Preparation for the activities in the Indonesia was done.
	B	Submission of the project plan	A Project Plan was prepared and submitted to JICA headquarters.

Location	No.	Activities	Summary of Activities
Activities in the field 1	C	Briefing of the project plan	The Project Plan was explained to the JICA Indonesia office, project leader / urban transportation policy advisor, counterpart agencies.
	D	Monthly plan and monthly activity reports	Monthly plans and monthly activity reports were prepared and submitted to the project leader / urban transportation policy advisor.
	E	Information collection and confirmation of the project plan	The required information and data were collected and submitted to the leader, short term experts and JICA Indonesia office. The project plan was also confirmed by them.
	F	Monitoring of the annual plan and summarizing inputs	The annual plan (assignment schedule of long and short-term experts, training of counterparts, fiscal plans of operational expenses and local portions) were monitored and inputs of the project were summarized.
	G	Management of JICA operational account, assets and miscellaneous	JICA's project operational account and assets were managed and the required fiscal reports were prepared and submitted.
	H	Assistance on revision of the project plan and coordination with relevant agencies	The project plan was revised in conjunction with Japanese and Indonesian relevant agencies due to implementation of the commuter survey and travel behavior survey.
	I	Attendance to the relevant meetings and monitoring of progress of the project	The expert attended the relevant meetings and monitored the surroundings of the project and progress of the project.
	J	Assistance to hold the Joint Coordinating Committee	Meeting handouts including management of the project, condition of capacity building and the future project plans were prepared. The expert attended preparatory meetings with the embassy of Japan, JICA Indonesia office and other related agencies.
	K	Information exchange with other related Japanese entities	The expert supported the leader to communicate with the Japanese public and private sector.
	L	Formulation of detailed project input plans	Coordinating with the leader, short-term experts and relevant agencies of Indonesian side, the detailed project input plan was formulated and implemented.
	M	Cooperation for procurement, activities in the field, dispatch of the experts and training in Japan	The expert supported JICA Indonesia office, the leader and the short-term experts in implementing procurement, activities in the field, dispatch of the experts and training in Japan.
	N	Public relations	The expert cooperated with media and disseminated information on the project and transportation in JABODETABEK. Media companies were also invited to the joint coordinating committee.
	O	Support to prepare reports	The expert supported the leader to prepare a variety of reports
	P	Other activities	The expert contributed to activities of capacity building and formulation of a transportation master plan.

Location	No.	Activities	Summary of Activities
Activities in the field 2 and 3	Q	Continuation of above activities	The abovementioned activities C-P were continued, and the expert supported smooth implementation of the project.
	R	Activities on termination of the project	The expert supported the leader and the short-term-experts to conduct activities on termination of the project such as reporting, meeting with relevant agencies.
	S	Preparation and submission of the final report of the expert	The final report of the transportation coordination advisor/project coordinator was prepared and submitted to the counterpart agency.
Wrap-up	T	Report to JICA headquarters	The expert reported to JICA headquarters

Source: JUTPI 2

(2) Short-Term Experts

Ten short-term experts working 56.1 man-months in total were dispatched. A summary of the dispatch record is as follows.

Table 5 Summary of Dispatch Record (Man Month) of Short-Term Experts

Assignment	Name	1 st Year	2 nd Year	3 rd Year	Total
Team Manager/Urban Transport Planning (1)	Mr. Sadayuki YAGI	2.93	5.10	3.53	11.57
Deputy Team Manager/Urban Transport Planning (2)/Demand Forecast	Mr. Takanori ODA	0.70	2.80	1.60	5.10
Urban Transport Economics/Environmental Impact Analysis & Evaluation	Mr. Hiroshi MATSUOKA	0.93	1.37	-	2.30
Transit Oriented Development (1)	Mr. Takeshi MITA	1.40	0.70	0.70	2.80
Transit Oriented Development (2)	Ms. Tomoko ABE	1.00	1.00	1.70	3.70
Urban Transport Facility Assessment/Design/Road Planning/Pilot Project	Mr. Hitoshi OKITA	1.00	2.50	0.87	4.37
Transport Surveys/Urban Transport Database (1)	Mr. Deo NOBEL	3.27	4.03	2.27	9.57
Land Use/Urban Transport Database (2)	Ms. Kayoko MIYAO	0.83	2.77	0.40	4.00
Urban Transport Policy Integration	Mr. Hirohisa KAWAGUCHI	2.50	3.67	3.60	9.77
Public Transport Planner	Manabu OWADA	-	1.30	0.70	2.00
Pilot Project	Minoru MATSUI	-	-	0.93	0.93
Total		14.57	25.24	16.30	56.10

Source: JUTPI 2

2.7.2 Project Office

The JUTPI 2 project office was set at Setiabudi Building 2, 5th floor, room 502, Jl H.R Rasuna Said Kav. 62, Karet Kuningan, Jakarta Selatan 12920, from July 2017 until October 2019.

2.8 Changes in Record of Discussions (R/D)

JICA and the CMEA agree to the changes of Record of Discussions on JUTPI 2 signed on November 7, 2016, amended on April 18, 2019 with the subject as follows:

1. The duration of the project will be five years and three months until October 2019, with the reason because of the inevitable delay of project activities, in particular data collection for key transportation surveys, caused by the implementation of Odd-Even plate number policy that impacts travel behavior substantially.
2. Title of counterparts due to the correction of titles of Co-chair of steering committee, Project Director, Co-Project Director, Project Manager and Co-Project Manager.
3. Evaluation due to the introduction of monitoring sheets; the latest monitoring method used for JICA's technical cooperation projects.

Chapter 3 Detailing the JABODETABEK Transportation Master Plan (RITJ)

3.1 Overall Objectives and Activities

Review of JABODETABEK Transportation Master Plan (RITJ) was conducted, taking into consideration the changing socioeconomic situation and the current status of planned transportation infrastructure development projects, and necessary investigation and analysis were conducted. Moreover, Screen Line Survey, Classified Vehicle Counting Survey, and Cordon Line Survey were conducted. In addition, based on the transportation database updated at the initiative of the counterpart, items to be improved in the master plan made by BPTJ were pointed out and reflected in the updated master plan (RITJ).

3.1.1 Purpose of Activity 1

The purpose of Activity 1 is to create a cross-ministerial and cross-boundary framework for the implementation of integrated urban transport policies in JABODETABEK area. The activities are listed below:

- 1-1 Detailing the JABODETABEK urban transportation Master Plan.
- 1-2 Development of Annual Monitoring & Evaluation Report (AMER) of the JABODETABEK Urban Transportation Master Plan.
- 1-3 Establishment and maintenance of JABODETABEK urban transportation database.
- 1-4 Establishment of sustainable framework to promote urban transportation policies in JABODETABEK.

3.1.2 Activity Output

The outputs of each activity item are shown below:

- 1-1 Detailing the JABODETABEK urban transportation Master Plan.
-

- Implementation of supplementary surveys such as Screen Line Survey, Classified Vehicle Counting Survey, and Cordon Line Survey and analysis of the survey results.
- Implementation of an Activity-Travel Diary Survey and analysis of the survey results.
- Study on the method of estimating economic loss and environmental burden as well as calculation of evaluation indicators and economic benefits.
- Development of transport demand forecast model by using transportation planning software and implementation of transport demand forecast.

1-2 Development of Annual Monitoring & Evaluation Report (AMER) of the JABODETABEK Urban Transportation Master Plan.

- Preparation of annual monitoring and evaluation sheets.
- Dissemination and capacity building for the relevant personnel (central and local government) to periodically update the AMER.

1-3 Establishment and maintenance of JABODETABEK urban transportation database.

- Establish a database from the result of Passenger Transfer Bottleneck Survey between public transport lines.
- Updating JABODETABEK urban transport database.

1-4 Establishment of sustainable framework to promote urban transportation policies in JABODETABEK.

- Policy development to promote urban transportation projects listed in the Master Plan.

3.2 Collection of Information on Transportation

The experts, together with the local government officials, collected various pieces of information on transportation prior to revision of the Master Plan. Transportation planning requires a variety of statistics, data and information. Since this information is stored in various organizations, these data were not always collected in the previous study. For example,

information of vehicle registration and automobile tax is collected by integrated office (*Sistem Administrasi Manunggal Satu Atap*, SAMSAT), which is set by local government and police by each region. There are two departments to collect the information of the number of registered vehicles in the office. One department is under the police, the other is under the revenue department (*Dispenda*) of local government which collects the automobile tax. Therefore, there is a difference between the number of both departments announce. The information from the department collecting revenue seems correct information since the department has been conducting deregistration regularly. However, it was difficult to collect the information and it is necessary to visit each office, and submit an official letter from the CMEA.

These transportation databases were handed over to CMEA.

- Transportation related data (bus routes, road condition, and railway condition)
- Socioeconomic data such as population and gross regional domestic products (GRDP)
- Related plans such as the spatial plan
- Financial data and information on human resources of local governments

Several basic analyses on transportation were done by the expert utilizing the collected information and survey results.

3.3 Assistance on Implementation of the Transportation Surveys

Plans included in JABODETABEK Transportation Master Plan (RITJ) needs to follow direction of KPI (Key Performance Indicator) and it is necessary to emphasize countermeasures for traffic safety as listed in nine pillars which are mentioned in the Presidential Regulation No.55 Year 2018 regarding RITJ. The coverage of RITJ includes the nine pillars of JABODETAEK transportation development policies, namely:

1. Improvement on Urban Transportation Safety and Security;
2. Development on Urban Transportation Network Infrastructure;
3. Development on Road-based Urban Transportation System;
4. Development on Rail-based Urban Transportation;

5. Development on Integrated Urban Transportation;
6. Improvement on Traffic Performance;
7. Development on Financing System of Urban Transportation;
8. Development on Integration of Urban Transportation and Spatial;
9. Development of Eco-friendly Urban Transportation.

Each pillar/policy of RITJ consists of strategies, each of which consists of programs that shall be broken down into several activities with their respective responsible institutions (central government and local government).

After RITJ is reviewed, additional study items are organized taking into consideration the changing socioeconomic situation and the current status of planned transportation infrastructure development projects, and necessary surveys and analyses are conducted. Since LRT is most likely to be the additional transportation infrastructure in the updated RITJ for various reasons including political reasons, the demand forecast result also shows that it cannot achieve the maximization of public transportation usage (refer to “8.1.2 RITJ Case” in Annex 6). Thus, it is highly important to forecast the demand to evaluate its impact. For this, it is considered to be minimally necessary to subdivide the transportation analysis zones (TAZs) with socioeconomic indicators along the planned LRT route.

As described later, the Screen Line Survey, Classified Vehicle Counting Survey, and Cordon Line Survey were implemented. As a result of these surveys, for example, since the Cordon Line Survey had not been conducted since SITRAMP in 2002, significant changes in the passenger and freight trips crossing the JABODETABEK boundary can be identified.

Furthermore, in this survey, in response to the issues of the existing survey and demand forecast models as mentioned below, Activity-Travel Diary Survey and Activity-Based Model are implemented.

- (1) Understanding rapid changes in socioeconomic conditions such as urban development and traffic conditions.
- (2) Multi-faceted transport policy evaluation in response to the rapid changes due to the

TDM/TOD measures, infrastructure development, etc.

- (3) Issues of existing methods such as surveys and models.
- (4) Requirement of accountability due to increasing social and environmental awareness.

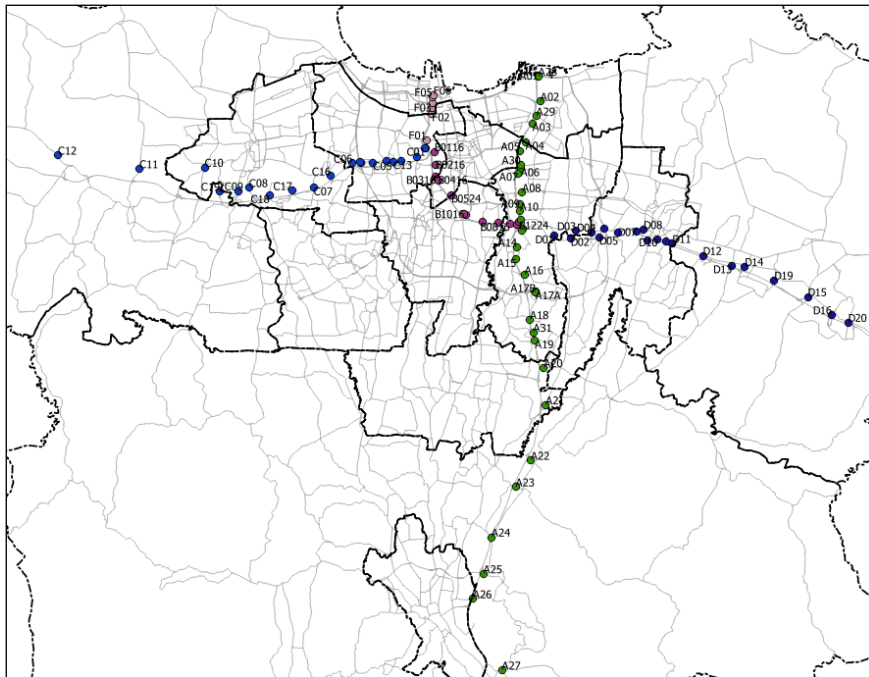
As a result of conducting Activity-Travel Diary Survey, it was possible to develop a model that takes into account the number of trips that are forgotten to fill in, detailed trip records, household composition in the model, urban policy, and TOD.

As mentioned above, planning evaluation, conducting transportation surveys, organizing and analyzing input data for demand forecasts using survey results, and developing the demand forecast models are state-of-the-art methods, and include many technical elements. Therefore, technical assistance is necessary in the course of this project.

3.3.1 Transport Surveys

1) Screen line Survey and Classified Vehicle Counting Surveys

Survey Objective: The main objective of the survey is to verify the present OD matrices which are estimated based on the results of the Activity-Travel Diary Survey. Also, by observing the traffic volume at some of the previous survey locations in JABODETABEK, the annual growth rate can be understood. Survey Location: The survey carried out at 91 locations (55 locations within Jakarta (16-hour survey) and 36 locations in BODETABEK area). The survey method of classified vehicle count is very simple. The number of vehicles that pass through the survey location is counted by type of vehicle and direction. The counting is conducted for every 15-minute period over survey duration. For the counting and validation purpose, the traffic recorded using CCTV camera or other video recording devices and placed in a high place. CCTV data from private CCTV operator and/or Transportation Agencies also obtained.



Source: JUTPI 2

Figure 6 Screen line Survey and Classified Vehicle Counting Survey Locations

2) Cordon Line Survey

Survey Objective: To obtain the number of trips flowing into and out of the Survey area at the cordon line survey stations in order to supplement the results of the Activity-Travel Diary Survey. Survey Type: The modes of transport to be studied by the Cordon Line Survey and the contents are listed below:

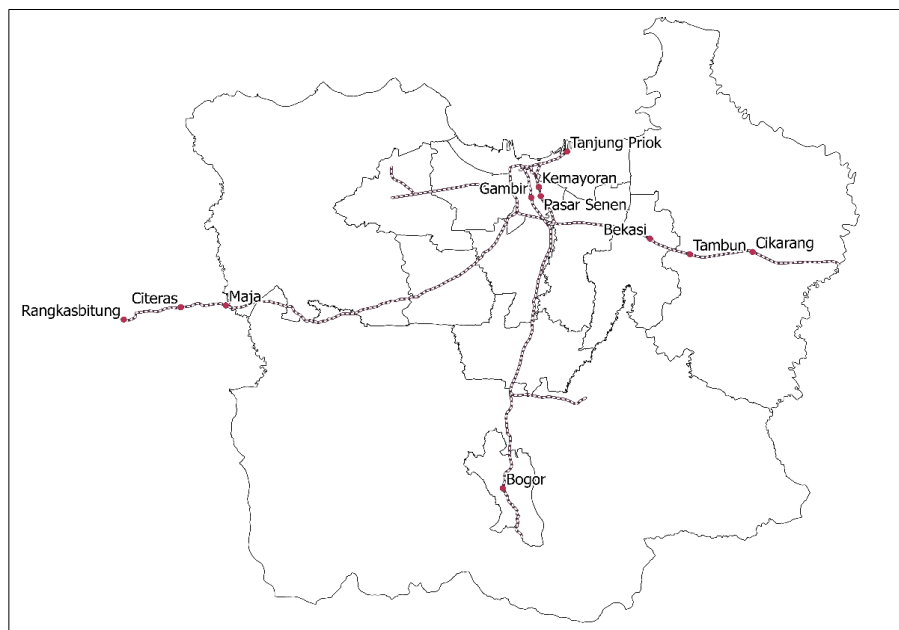
a) Railway Passenger OD Interview Survey

The survey basically is an on-board survey to be carried out by the surveyors who board the selected medium-and long-distance train and interview the passengers which correspond to roughly 20% of the total number of passengers about their OD, trip purpose, etc., and passenger counting to obtain the average daily travel pattern data who crossing the boundary of JABODETABEK region. The survey conducted in 9 stations for medium-long distance and local railway (Bekasi station, Bogor station, Cikarang station, Gambir station, Kemayoran station, Pasar Senen station, Tambun station, Tanjung Priok station, Rangkasbitung station) and 3 stations for commuter line railway (Citeras station, Maja station, Rangkasbitung station).



Source: JUTPI 2

Figure 7 Railway Passenger OD Interview Survey



Source: JUTPI 2

Figure 8 Railway Passenger OD Interview Survey Locations

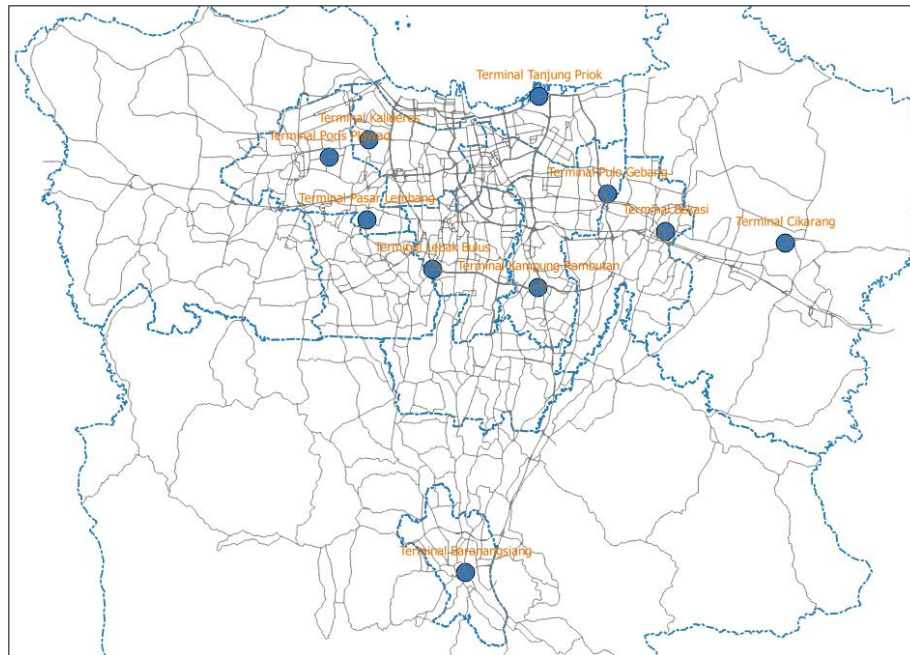
b) Intercity Bus Passenger OD Survey

The survey is carried out at major bus terminals inside JABODETABEK area (Terminal Tanjung Priok, Terminal Kalideres, Terminal Poris Plawad, Terminal Pasar Lembang, Terminal Lebak Bulus, Terminal Kampung Rambutan, Terminal Pondok Cabe, Terminal Leuwiliang, Terminal Baranang Siang, Terminal Pulo Gebang, Terminal Bekasi, Terminal Cikarang). The sample rate for OD interview meets these requirements:

- 1) Two out of every five mid-distance intercity buses were surveyed during the

survey period.

- 2) Two out of every five long-distance intercity buses were surveyed during the survey period.
- 3) Interviews were conducted to account for more than 50% of total passengers.



Source: JUTPI 2

Figure 9 Intercity Bus OD Passenger Location Survey

c) Airport-related Passenger & Freight Survey

The interview survey (for OD, trip purpose, etc.) was conducted targeting 20 % of the departing passengers in each survey point (Soekarno-Hatta Airport and Halim Perdanakusuma Airport) with the main objective to obtain passenger information and trip pattern data from departing passengers who are crossing the boundary of JABODETABEK. The obtained information was helpful to identify external Origin-Destination patterns of JABODETABEK.

Interview survey using the paperless method (tablet) was conducted only for departing passengers at the waiting room in each departure terminal at the two airports. Airport Passengers OD Interview Survey was conducted on weekdays (Tuesday, Wednesday, or Thursday). In Soekarno-Hatta International Airport, the survey was conducted for 24 hours, while in Halim Perdanakusuma, the survey duration was conducted for 16 hours. Such a difference in the survey duration is caused by the airport operation

hour that is different from one another.



Source: JUTPI 2

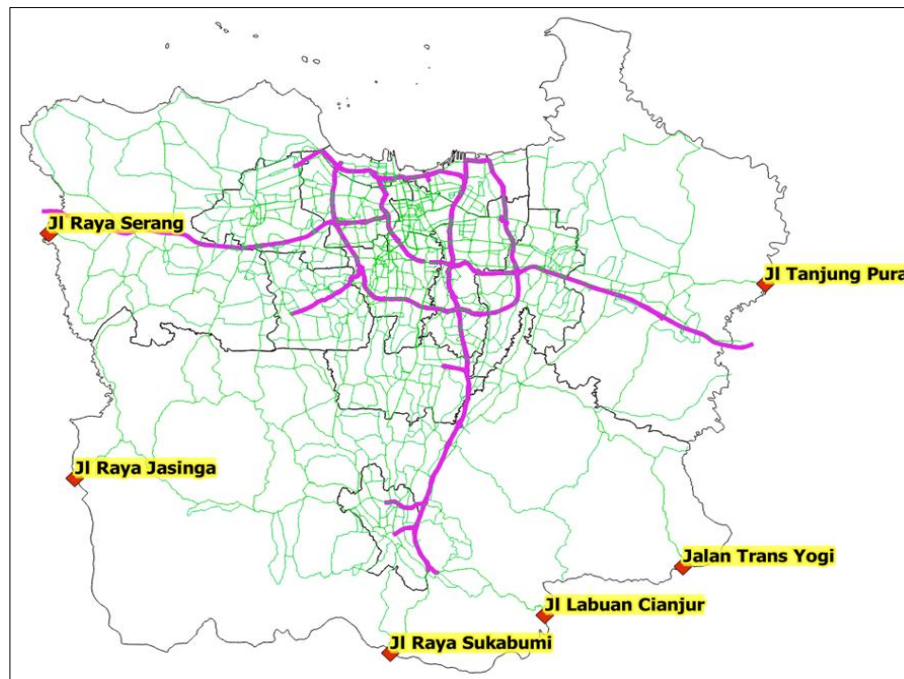
Figure 10 Interview Survey in Halim Perdanakusuma and Soekarno-Hatta Airport

d) Roadside OD Interview Survey (Ordinary Roads)

The survey carried out at nine locations on ordinary roads that intersect the JABODETABEK boundary (Jl. Raya Sukabumi, Jl. Labuan Cianjur, Jl. Trans Yogi, Jl. Tanjung Pura, main access road to Halim Perdanakusuma Airport, main access road to Soekarno-Hatta Airport, Jl. Raya Serang, Jl. Millennium Industrial Area, Jl. Raya Jasinga). The interview survey targeting 20 % of the vehicles passing through the survey stations but the count survey covers all vehicles traveling through.

The interview was done to collect the passenger trip characteristics (origin-destination, etc.) by two methods:

- **Direct Interview:** The direct interview was conducted at the roadside with assistance from local transportation agencies and local traffic police officers to pull over the target vehicles to the designated location. Then, the surveyor conducted interviews utilizing the paper-based survey form.
- **Web-based Method:** OD interview by the web-based method was applied to vehicles in case that could not be pulled over for direct interview due to the absence of traffic officers or that they were forming queue which might cause traffic congestion. Quick Response Code (QR-code) and Uniform Resource Locator (URL) that enabled access to online survey form were provided. QR-code and URL were uniquely generated by location, direction, hour, and representative vehicle classification, and printed on flyers.



Source: JUTPI 2

Figure 11 Roadside Interview Survey Locations

In the traffic count survey, the number of vehicles that pass through the survey location was counted by type of vehicle and direction. The counting was conducted by a period of time; every 15-minute period over the survey.

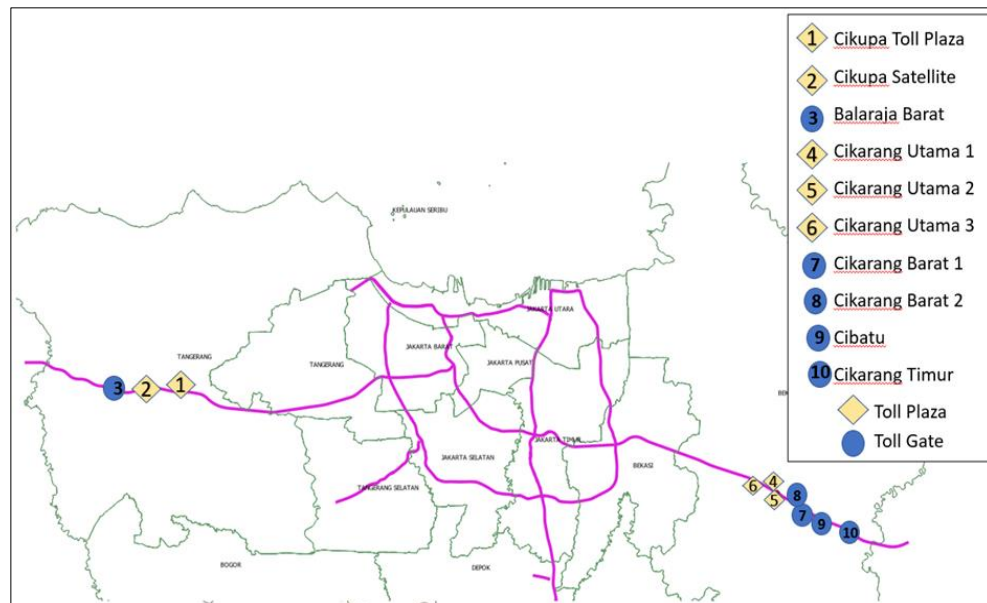
The occupancy survey measures the number of passengers in every vehicle passing by the survey location. Vehicle occupancy was observed targeting the same traffic direction as the traffic count and was conducted for every hour during the survey duration until one of the following requirements was fulfilled:

- 30 vehicles per vehicle type per direction have been observed, or
- 20 minutes of observation has passed per direction and per hour.

e) Inter-regional Tollway OD Interview Survey

The interview survey is conducting targeting 20% of the vehicles passing through the survey area but the count survey covers all vehicles traveling through. In order to avoid the omission of traffic traveling through the Cordon Line (JABODETABEK boundary) on both routes, the survey conducted at a total of 10 locations (Cikupa Toll Plaza, Cikupa Satellite, Balaraja Barat, Cikarang Utama 1, Cikarang Utama 2, Cikarang Utama 3, Cikarang Barat 1, Cikarang Barat 2, Cibatu, Cikarang Timur Toll

Plaza & Toll Gate). These are the barrier gate toll plaza on the main line (both directions) near the JABODETABEK boundary and the on-ramp, off-ramp toll plazas of the interchange located between the barrier toll plaza and the JABODETABEK boundary.



Source: JUTPI 2

Figure 12 Inter-Regional Tollway OD Interview Survey Locations

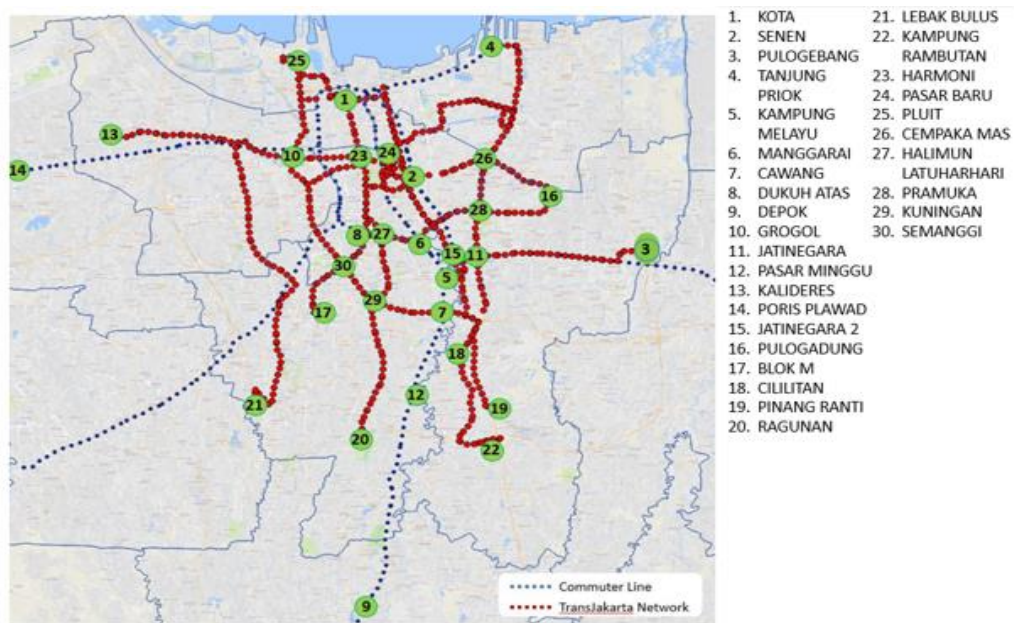
The interview was done to collect the passenger trip characteristics (origin-destination, etc.) by two methods:

- **Direct Interview:** The direct interview was conducted at Rest Area before the JABODETABEK borderline where no Interchange before it. Vehicles coming into the Rest Area and park then approached by the surveyor and the surveyor conducted interviews utilizing a paper-based survey form.
- **Web-based Method:** Quick Response Code (QR-code) and Uniform Resource Locator (URL) that enabled access to the online survey form were provided. QR-code and URL were uniquely generated by location, direction, hour, and representative vehicle classification, and printed on flyers.

For traffic count and occupancy survey in this survey, using the same method as applied in the roadside OD interview survey.

3) Public Transport Passenger Transfer Bottleneck Survey

The main objective of this survey is to obtain data on how long it takes for passengers to transfer from a conventional bus, BRT, or railway line to another conventional bus, BRT, or railway line. There is a total 30 public transport transfer locations including conventional bus, BRT, and railway lines. At each transfer location, about 50 transferring passengers are interviewed and asked about the bottleneck conditions including walk time and waiting time in the peak and off-peak time periods.



Source: JUTPI 2

Figure 13 Transfer Point Locations

4) Activity-Travel Diary Survey - Paper Based

The survey especially focuses on respondents who live in the newly developed area since JUTPI 1 commuter survey in 2001. The survey implemented in JABODETABEK area (162 *Kecamatan*) with total respondents of 5,000 people from 5,000 households, conducted by conventional home visit interviews and interview surveys based on the paper survey form, collecting socioeconomic data (household, individual) and commuting trip data. (See 3.4.1 for detail.)

5) Activity-Travel Diary Survey - Smartphone Based

The survey implemented using MEILI, an open source smartphone-based application for recording people's trip or movement (mobility collector) developed and used in several areas in European countries to obtain information about the respondent's trip pattern. JUTPI 2 developed the application by adding activity detail feature and adjusting the application with the condition of the transportation system in JABODETABEK. The Activity Travel Diary Survey using Smartphone Application or ADS-MEILI is the first survey in Indonesia which recording respondent's trip and activity by using smartphone application. The application recorded respondent's trip and activity during 7 consecutive days, with the series of the survey which consists of socioeconomic survey and activity record survey targeting 5.000 respondents utilizing the JUTPI 1 commuter trip survey respondent data.

New regulation of controlling the traffic by allowing vehicles holding license plates of only odd or even numbers has been introduced to central Jakarta since 2016. In order to consider its impact, changes in the traffic volumes in the Screen Line Survey can be compared; furthermore, it is also possible to clarify the travel behavior by odd and even days (change in the choice of travel modes). Moreover, in the Travel Speed Survey in the section below, it is also possible to analyze the impact of traffic congestion in the area surrounding the targeted roads. Other than the above-mentioned survey, in order to study the KPIs set by previous JUTPI 1 study and RITJ, the following two transport surveys on current conditions are implemented.

6) Travel Speed Survey

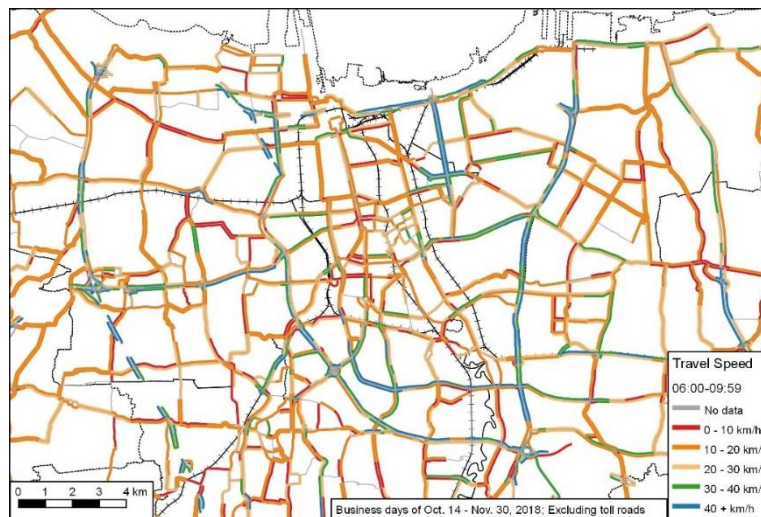
The main objective of this survey is to study the travel speed in order to understand the degree of traffic congestion and travel times, and to identify the congestion points by different time period and by day and also to calibrate/validate the transportation model. The data result is to be utilized for updating RITJ and for proposing transport policies. Survey Outline: JUTPI 2 purchased 350 million GPS point data from the GPS provider company in September and October 2017 and developed a GIS road network of roughly 5,000 links in JABODETABEK. The position data from the GPS provider were gathered at a server on a real-time basis in order to obtain the average travel speed by

section for all streets in JABODETABEK.

Major findings based on the result of the travel speed survey in arterial roads and toll roads are as follows:

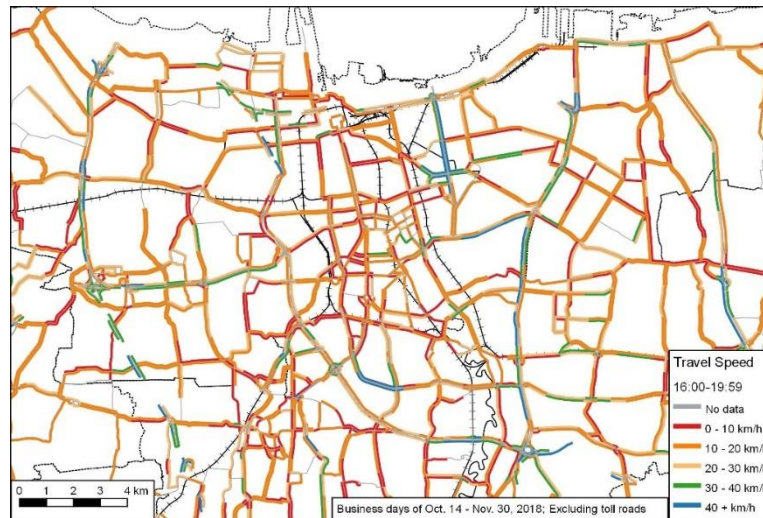
1. Travel speed survey in arterial roads:

- Low speed is observed in all the *Kota* and *Kabupaten* in JABODETABEK during both morning and evening peak hour. Evening peak travel speeds are relatively lower than those of the morning peak.
- The numbers of bottleneck intersections that are inter-connected with each other are observed. A further detailed study in each *Kota* and *Kabupaten* is awaited. JUTPI 2 travel speed survey results can be a powerful tool for detail study.



Source: JUTPI 2

Figure 14 Travel Speed in DKI Jakarta CBD (Business Day, 6-10AM)

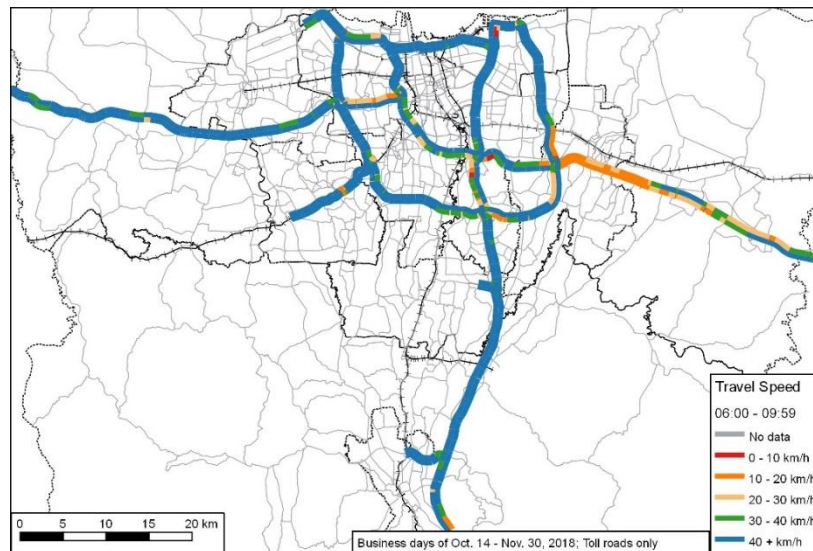


Source: JUTPI 2

Figure 15 Travel Speed in DKI Jakarta CBD (Business Day, 4-8PM)

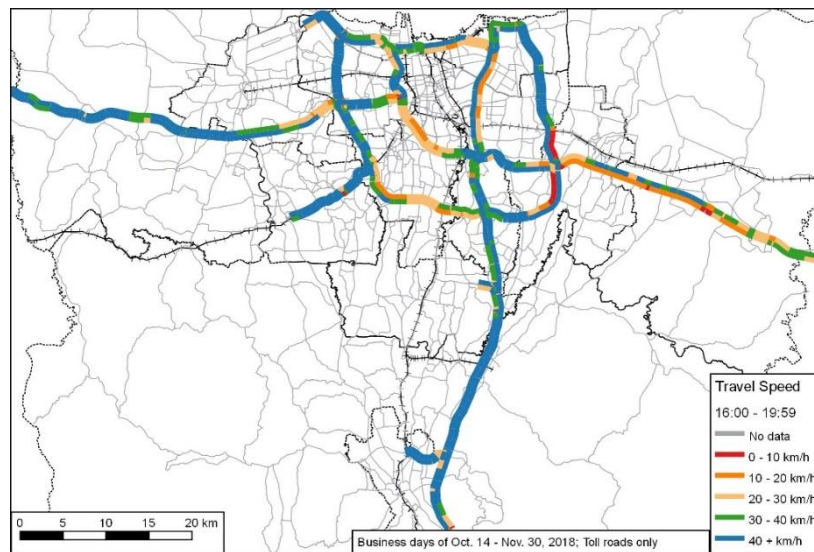
2. Travel speed survey in toll roads:

- Low speed is observed in Jakarta-Cikampek Toll Road and Intra-Urban Toll Road during morning peak hour.
- Low speed is observed in many sections in JABODETABEK during evening peak such as Jakarta-Cikampek Toll Road, Intra-Urban Toll Road, and South and East sections of Outer-Ring Road.



Source: JUTPI 2

Figure 16 Travel Speed in Toll Road (Business Day 6-10AM)

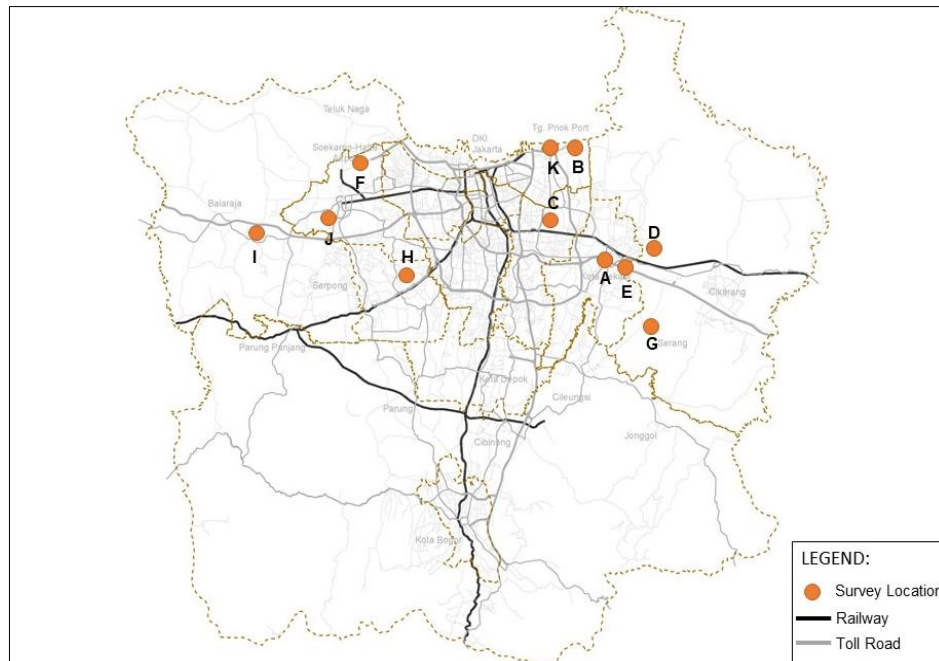


Source: JUTPI 2

Figure 17 Travel Speed in Toll Road (Business Day, 4-8PM)

7) Truck OD Interview Survey at Major Freight Facilities

The main objective in this survey is to obtain the trip pattern of freight vehicles at their main departure and destination points, such as industrial areas and ports. The survey results are to be used for transportation facility planning for large freight vehicles and as well as basic data for proposing heavy vehicle traffic regulations. Truck driver interview and traffic counting were implemented in 11 locations (Kawasan Industri Pasar Baru, JIEP Pulo Gadung, KBN Marunda, MM2100, EJIP, Jababeka, Kawasan Industri & Pergudangan Cikupamas, Taman Tekno BSD, Greenland International Industrial City, Soekarno-Hatta Airport Cargo Terminal, Tanjung Priok Port). CCTV traffic count for validation conducted in three locations (Jl. Perintis Kemerdekaan, Jl. Bekasi Timur, Jl. DI Panjaitan).



Source: JUTPI 2

Figure 18 Truck OD Interview Survey Locations

3.4 Activity-Travel Diary Survey

3.4.1 Paper-Based Activity-Travel Diary Survey

The main objective of the activity travel diary survey (ADS) using Paper and Pencil Interview (PAPI) or paper-based ADS is to obtain data of activity-travel from each respondent (worker, student, and non-worker) within the JABODETABEK area. The paper-based ADS focuses on respondents who live in the newly developed area.

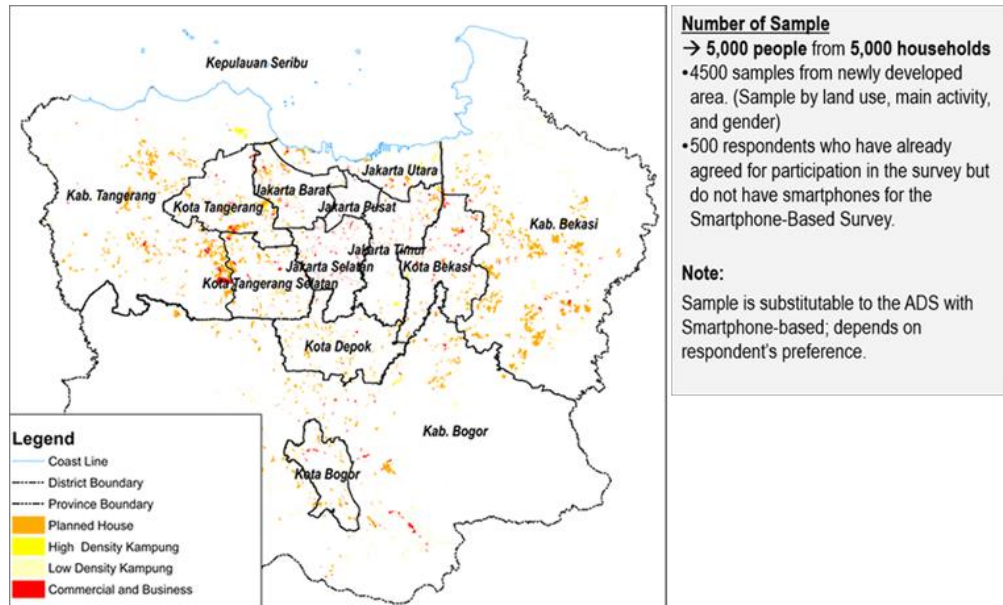
The data collection in the paper-based Activity-Travel Diary survey was divided into two parts:

1. Part 1: Socioeconomic Data (Form 1: Household, Form 2: Individual)

The interview was carried out to collect socioeconomic information of each household (Form1), such as: income, auto-ownership, household member's main information, etc. There are specific questions for one member of each household, such as: personal income, main activity, daily mode to commute, etc.

2. Part 2: Activity-Travel Diary (Form 3: Trip chain)

This part was done to collect the activity and travel information for three consecutive weekdays at 15-minute intervals.



Source: JUTPI 2

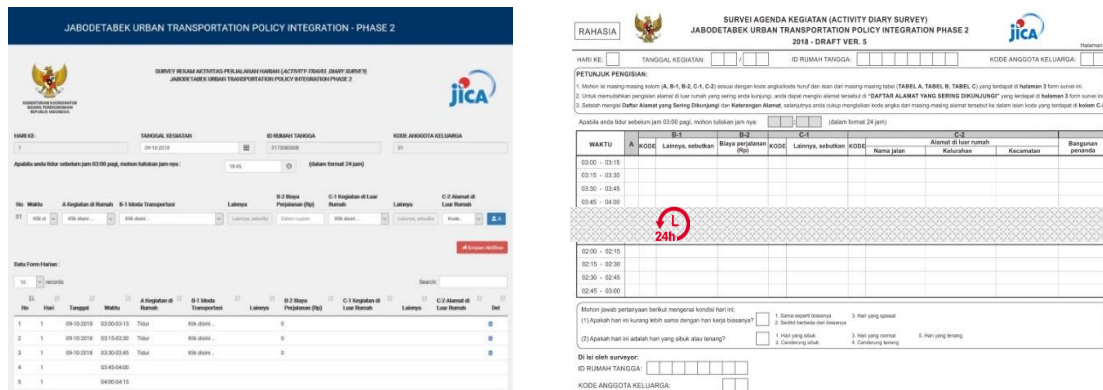
Figure 19 Paper-Based ADS Target Sample Area

Survey methodology for the paper-based ADS are as follows:

1. Interview survey through conventional method of home visit;
2. Conducted by using tablet devices to avoid errors in writing and inputting responses;
and
3. For Form 3 (Activity-Travel Diary), method of filling in the diary survey forms is explained and respondents are asked to fill in the forms by themselves.

Based on the findings during survey implementation, the following are the issues encountered by the survey implementation team.

1. Hesitation from the respondents to participate due to the privacy issues: being tracked/recorded for 3 days consecutively;
2. Rejection mostly comes from the middle-upper class;
3. This survey is suspected to have connection to the next-year presidential election; and
4. Complexity of Form 3 (Activity-Travel Diary).



Source: JUTPI 2

Figure 20 Web-Based and Paper-Based Version of Paper-Based ADS Questionnaire

3.4.2 MEILI-Based Activity-Travel Diary Survey

Activity travel diary (ADS) survey using a smartphone application called MEILI JABODETABEK (ADS-MEILI) is an innovative activity-travel diary collection conducted in Indonesia. The existing MEILI, which can accurately record locations of the target survey respondents carrying their smartphones, has been upgraded to be utilized in Indonesia with an expectation of its future continuous use. Taking it into account that 67% of the population utilizes smartphones in the western part of Java Island, the smartphone application platform is considered promising with a GPS feature that enables collection of location data in a comprehensive way. MEILI, an open-source smartphone application for mobility collectors, had been successfully experimented on in Stockholm and Gothenburg, Sweden between 2014 and 2017 and was adopted as the base smartphone application to conduct ADS in JABODETABEK.



Source: JUTPI 2

Figure 21 Activities During Paper-Based ADS Interview

Adjustments to the study area include:

1. Points of interest (POI);
2. Base map, transit lines, and road network; and
3. Type of transport mode and its characteristic (i.e. speed, acceleration, fare, etc.).



Source: JUTPI 2

Figure 22 Flow of ADS MEILI JABODETABEK

Thus, “MEILI JABODETABEK” application was developed and utilized for one of the survey methods of ADS. ADS with MEILI targeted collection of trips of 35,000 person-days by asking 5,000 respondents from 5,000 different households that were once surveyed in last CTS (Commuter Trip Survey of JUTPI 1) to cooperate once again. That is, they were asked to install MEILI in their own smartphones and carry the phones for seven consecutive survey days with MEILI activated.

Simultaneously, PAPI (Paper and Pencil Interview)-based ADS was also conducted for comparison and complementary purpose. ADS with PAPI targeted 5,000 respondents from 5,000 households that live in the newly developed suburban areas since it was also necessary to collect the activity-travel data of the residents who were not surveyed by the last CTS in 2010. PAPI-based ADS was also prepared for respondents who did not possess smartphones. Collected data from both methods of ADS mainly consists of socioeconomic data of households and activity-travel data of individuals.

In cooperation with the national government, ADS was initially introduced to the former CTS respondents via SMS with official sender ID. Call center with well-trained operators was then responsible for calling the prospective respondents and asking for the participation in the MEILI-based ADS. Once the agreement was made and consent was acquired from the respondents, they needed to follow further steps and instruction to fill in the socioeconomic information and to get familiar with the smartphone application.



Source: JUTPI 2

Figure 23 ADS MEILI Call and Control Center

Furthermore, the control center needed to remind the respondents to conduct the ‘annotation’ (confirmation of respondents’ activities and detail trips) and to attend to the respondents on a daily basis. During the seven-day survey period, MEILI JABODETABEK recorded respondents’ coordinate data such as latitude and longitude of GPS points. The origin, destination, mode transfer location, and other attributes were collected by MEILI while the trip length and duration were also calculated. Items to be confirmed by the respondents through annotation included the type of modes used, fare spent, and main purposes/activities of the trips.

The implementation of MEILI ADS was faced by several challenges, namely:

1. Firmware of certain types of Android phones that automatically forces application to close for saving battery consumption;
2. Excessive GPS points record that drains the battery;
3. GPS accuracy disruption for specific types of area such as high-rise buildings, highways, and inside the rail-based public transportation.

Challenges were also encountered in obtaining the respondents, namely:

1. The tendency to reject the survey introduction by phone call;
2. Various abilities and accessibility to the use of online forms/smartphone application.

Moreover, to annotate trips, the MEILI JABODETABEK interface was considered too complicated for some respondents. Therefore, in-depth assistance from the control center was provided to guide the respondent through the steps for both socioeconomic data collection and trips annotation.

As a result, the average gross trip rate of ADS with MEILI was 3.22, which was significantly higher than that of ADS with PAPI, namely, 1.89. This implies that ADS with MEILI collected all trips that ADS with PAPI might have missed. Since the resolution of ADS with MEILI results was much higher than ADS with PAPI in terms of coordinates, time and acceleration, *it enables various analyses such as transit location and routes.*

By analyzing the survey results and issues, points to be improved are identified, such as function to avoid forced closure, attractive and user-friendly interface, improvement of GPS accuracy and recording performance, an advanced machine-learning system to reduce respondents' burden for annotation, as well as other supporting steps, namely provision of attractive incentive, extensive public relations from survey organizer and also government support in disseminating survey activities. With comprehensive travel data that can be acquired from ADS with the utilization of smartphone application, it is considered a promising tool to be utilized for conducting travel survey, particularly for developing a travel demand forecast model.

3.5 Coordination for the Urban Transportation Master Plan

One of the outputs of this project is to detail the current JABODETABEK transportation

master plan (RITJ). The detailing work involves the effort of attributing existing model with updated information of transportation network capacity, origin-destination, and evaluation of current transportation policy that is applied. Furthermore, projection demand is predicted within the years of plan, they are 2024, 2029/30, and 2035. The ultimate year of plan of 2035 includes all the projects from RITJ with adjustment and additional proposed plans assessed.

3.6 Transportation Demand Forecast

Based on the abovementioned collected information and transportation survey results, the large-scale database that was established in JUTPI 1 is updated. The updated database was utilized as an essential input of Activity-based Model (ABM). Details are described in Annex 8.

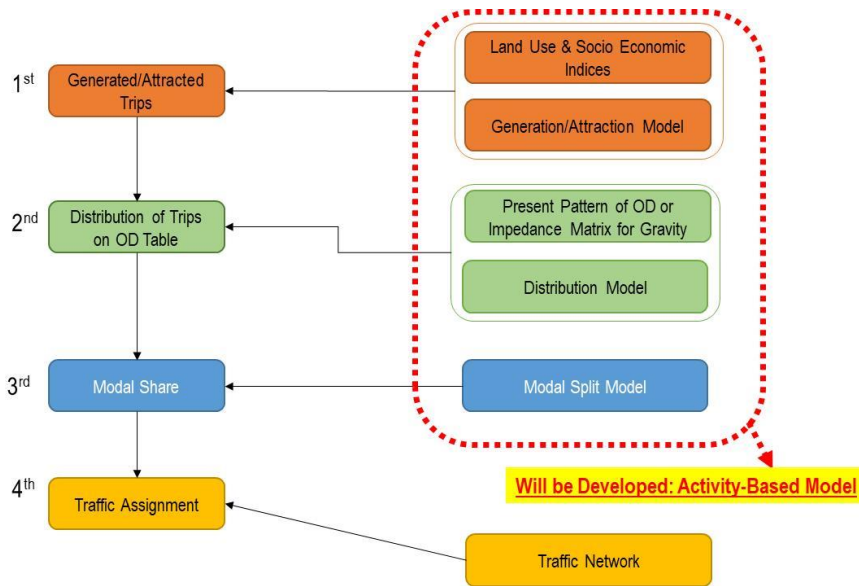
(1) Updating of Transport Demand Forecast Model

Demand forecast models for each step of the four-step model were developed in JUTPI 1. Based on the Commuter Survey and collected information from related organizations, the transport demand forecast model was updated during JUTPI 1. JUTPI 2 considers ABM as the method of JUTPI 1 database update. Transportation surveys and core survey ADS have enabled the application of ABM into each step of the conventional four-step method. The model is updated considering various changes on travel behaviors. For instance, the number of motorcycle users has been increasing rapidly. In addition, the existence of so-called “new” modality system that is based on internet has been widely in favor to the modal choice. Therefore, the modal choice model was revised. The modal choice model for commuter trips was revised based on the result of the ADS with calibration and validation towards the transportation surveys. The Mass Rapid Transit (MRT) plan and the road pricing plan were also incorporated into the model.

(2) Transport Demand Forecasting

The transport demand forecast model was developed based on the ABM (Activity-Based Model). The basic statistical information, such as number of populations by age group by *Kelurahan* (community area) and workers by working area are utilized as inputs to the model. OD tables by trip purpose, time group, mode and income bracket were estimated by using the ABM model. Traffic assignment was carried out using network data that was developed

using existing road information and so on. The validity of the assignment result was checked by comparing with the result of the traffic count survey. After that, the future socioeconomic framework, OD table, and transport network were developed using the above method. Traffic assignment was carried out again using the above information. Future traffic volume was estimated for each scenario.

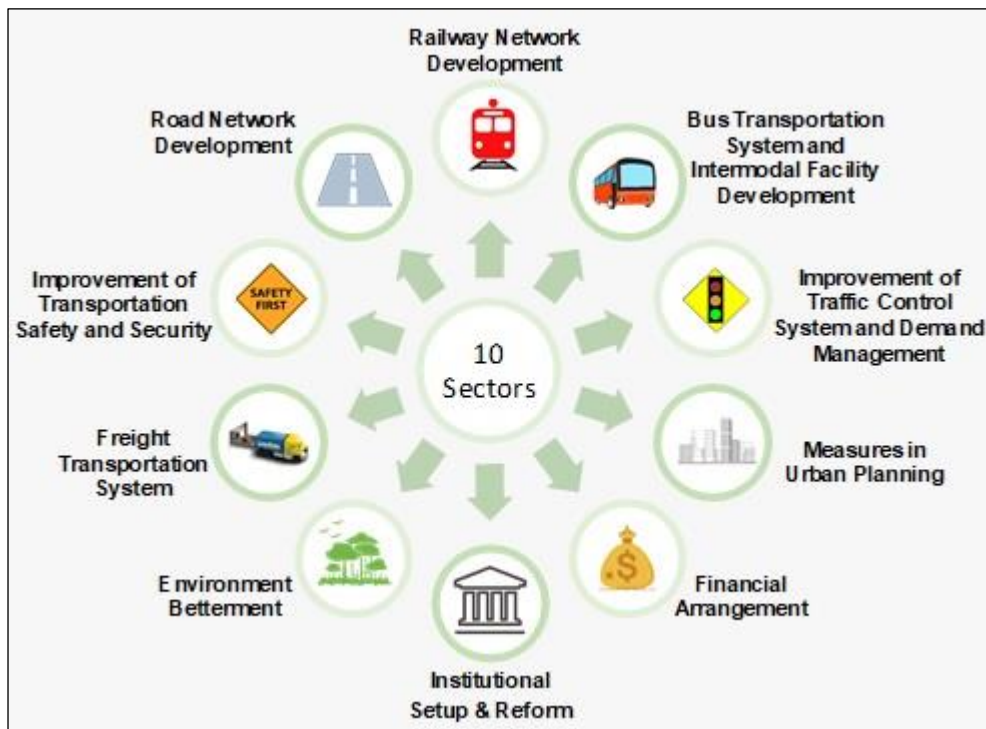


Source: JUTPI 2

Figure 24 Flow of Transport Demand Forecast

3.7 Detailing Transportation Master Plan (RITJ)

Details are as per the Master Plan in Annex 4. The components of the Master Plan are based on the proposals of the Indonesian government, that is, the implementation of policies in ten sectors of developing road and railway networks, developing bus transport systems and its facilities, safety and security of transportation, traffic control system improving financial and demand management, developing freight transport systems, taking measures in urban planning, improving the environment, setting up and reforming the financial system to support the implementation of the program itself



Source: JUTPI 2

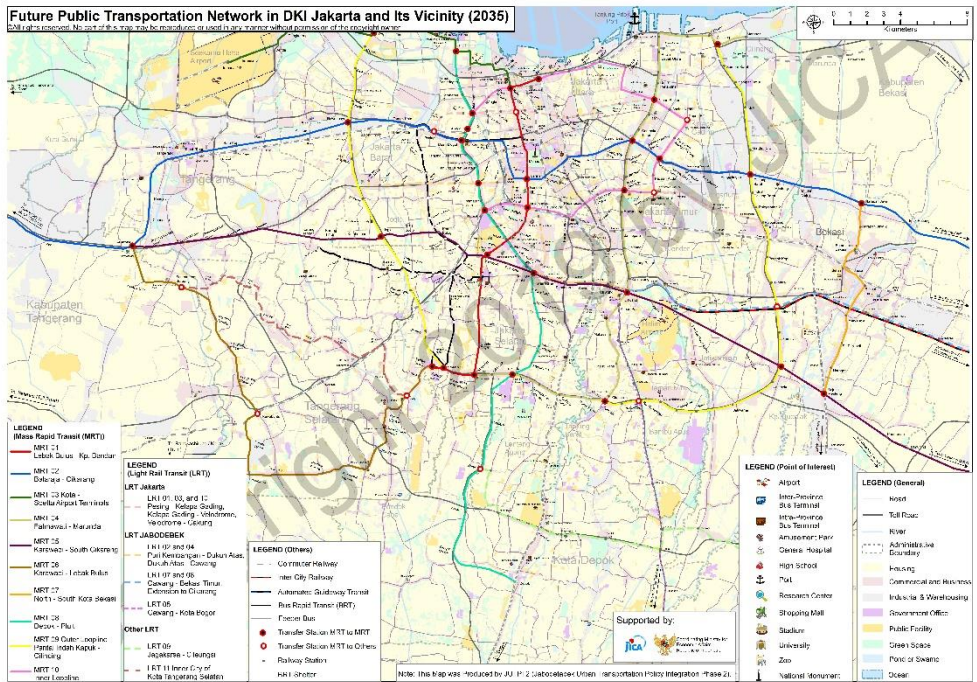
Figure 25 Master Plan Components of JUTPI 2

In order to prioritize public transport development, traffic volume was estimated based on the assumption of no capacity limit. It showed the outline of traffic demand to give directions to the scenario. After that, some development plans for transport facilities and project lists were formulated. Each scenario was evaluated considering cost and so on. The following four scenarios were formulated in this study.

- Intensive Public Transportation Development + Intensive Road Development Scenario
- Intensive Public Transportation Development + Moderate Road Development Scenario
- Moderate Public Transportation Development + Intensive Road Development Scenario
- No Development Scenario

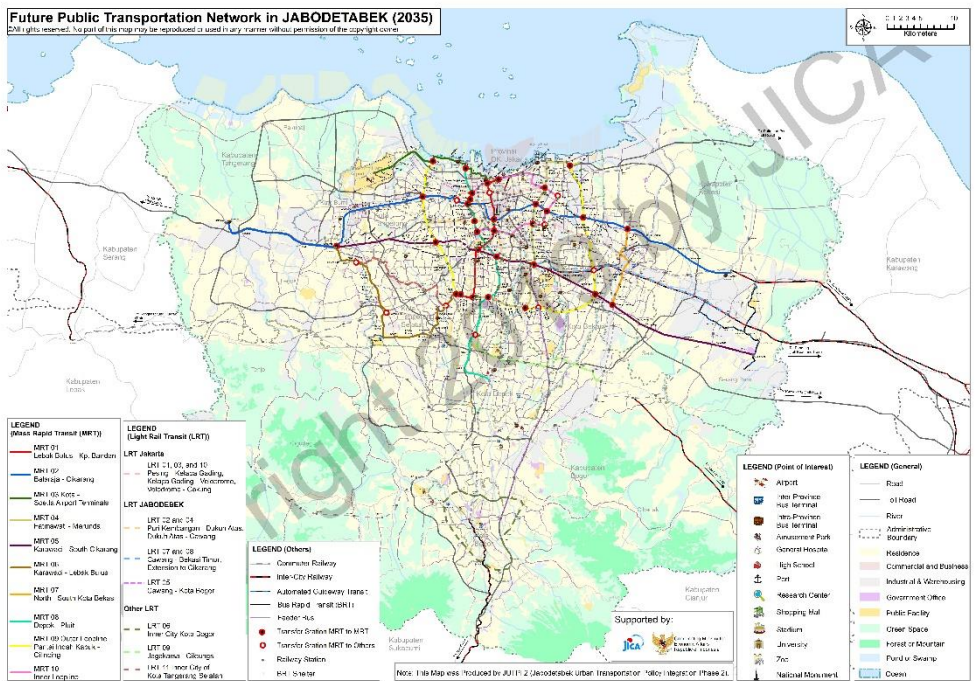
As a result of comparing the scenarios, the “Intensive Public Transportation Development + Moderate Road Development Scenario” was evaluated as the best scenario and recommended.

In addition, based on the results, the details of the Master Plan were examined, and the following future forecast maps were submitted as well as changes in the KPI of the Master Plan.



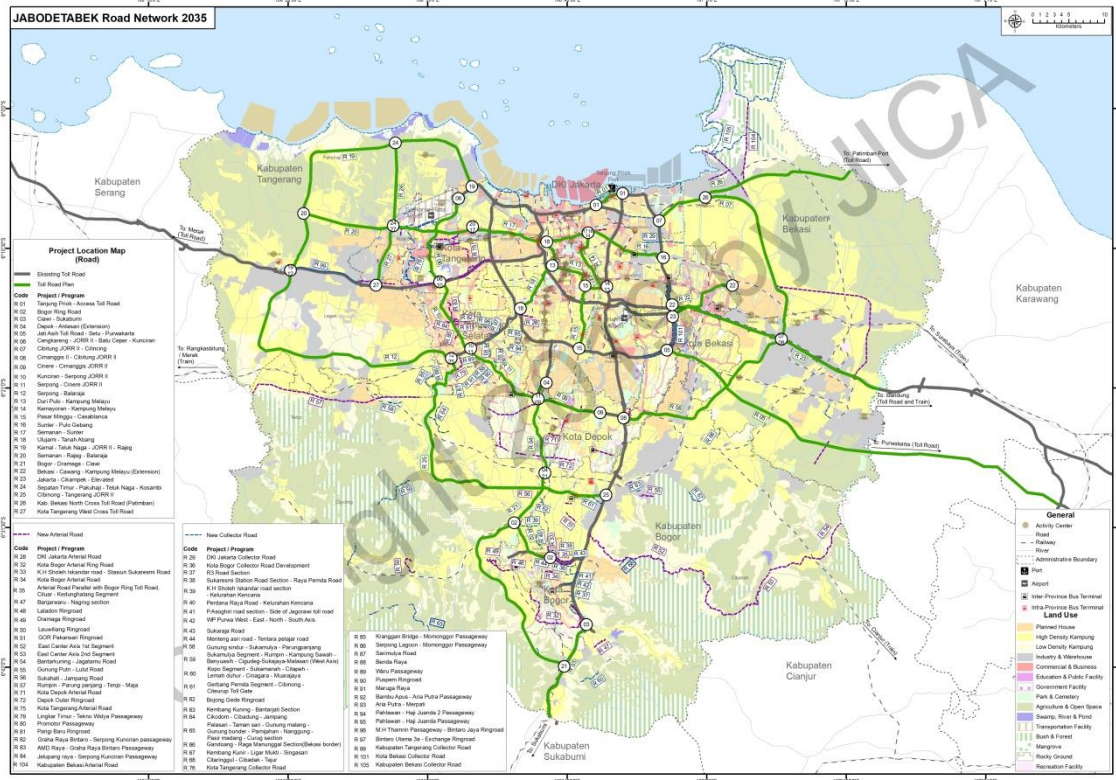
Source: JUTPI 2

Figure 26 Future Public Transportation Network in DKI JAKARTA (2035)



Source: JUTPI 2

Figure 27 Future Public Transportation Network in JABODETABEK (2035)



Source: JUTPI 2

Figure 28 JABODETABEK Highway Network (2035)

Table 6 KPI List by Master Plan

Objective	Indicator	Target			
		2018	2024	2029	2035
Mode Share	Mode share in ERP area during ERP operation time	6%	30%	40%	50%
Efficiency	Average person travel time in public transport modes at peak hour	81'	60'	50'	45'
Availability	Coverage of BRT and rail-based public transport in Urbanized Area (%)	23%	23%	25%	40%
Convenience	Average number of transfers for public transport passenger	1.0	1.0	0.9	0.8
Safety	Number of fatalities	2,163	1,082 (-50%)	757 (-65%)	433 (-80%)
	Number of severe injuries	1,193	597 (-50%)	418 (-65%)	239 (-80%)
	Number of accidents	7,123	3,562 (-50%)	2,493 (-65%)	1,425 (-80%)
Environmental Betterment	CO ₂ emission (kg/ day/ person)	0.95	0.90	0.85	0.80
	CO emission (kg/ day/ person)	1.10	1.00	0.80	0.70
	VOC(HC) emission (kg/ day/ person)	0.35	0.30	0.25	0.20
	NO _x emission (kg/ day/ person)	4.00×10^{-3}	3.50×10^{-3}	3.00×10^{-3}	2.50×10^{-3}
	PM ₁₀ emission (kg/ day/ person)	4.25×10^{-4}	4.00×10^{-4}	3.50×10^{-4}	3.00×10^{-4}

Source: JUTPI 2

The Annual Monitoring and Evaluation Report (AMER) is also developed and proposed a system to monitor the implementation of transportation programs/projects to achieve objectives, targets, and outcomes. It creates a report sheet to monitor, so that the progress can be checked to achieve the goals.

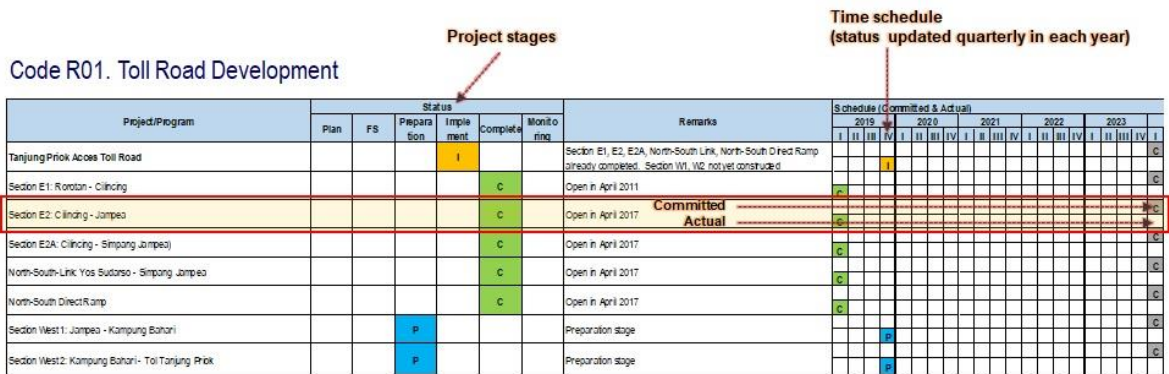


Figure 29 AMER Monitoring Sheet

3.8 Final Output of the Master Plan

According to the mandate of the Presidential Regulation No. 55 Year 2018 regarding JABODETABEK Transportation Master Plan (RITJ), the policy of the development and management for urban transportation in JABODETABEK area are directed to the following:

- Integration in the construction and development of transportation infrastructure network system and transportation services network, both intra and inter modes;
- Integration in the construction and development of urban transportation between regions in JABODETABEK in one single urban area;
- Integration in the operation of urban transportation; and
- Integration in the urban transportation financing plan.

Analysis of the changes of socioeconomic activities and relevant factors related to transportation during the period from 2019, which is the base year for JUTPI 2 proposed projects, to the year 2035 gave insight on the trend of urban transportation phenomena. Through the review and understanding of the progress and changes, it is confirmed that the goals for urban transportation system development identified in the previous JUTPI 1 master plan formulation are still valid for the present JUTPI 2 proposed projects. To achieve policy direction of urban transportation system development, the following urban transportation development sector programs were formulated by JUTPI 2:

- 1) Road Network Development;
- 2) Railway System Development;
- 3) Improvement of Traffic Control System and Demand Management;
- 4) Improvement of Transportation Safety and Security;
- 5) Bus Transportation System and Intermodal Facility Development;
- 6) Measures in Urban Planning;
- 7) Freight Transportation System;
- 8) Institutional Setup and Reform;
- 9) Financial Arrangement; and
- 10) Environmental Betterment.

The projects proposed by JUTPI 2 were obtained from the result of ‘road show’ activity conducted by JUTPI 2 team to each *Kota/Kabupaten* in JABODETABEK, development plans in the transportation sector from the Spatial Planning (RTRW) documents, as well as the results of transportation demand forecast modeling carried out based on the inputs from the results of various transportation surveys that have been implemented during the project implementation.

Chapter 4 Pilot Project Implementation

4.1 Overall Objective and Activities

To promote coordination of each agency in the region in terms of the transportation issue, as well as to improve the capacity of local government related with the urban transportation sector at the planning, implementation, and evaluation stage, pilot projects were conducted. The pilot projects were focused on enhancing the capacity of agencies in Local Governments to implement transportation projects in JABODETABEK through the implementation of a small project that can improve public transportation usage. In JUTPI 2, the objectives of the pilot project implementation are as follows:

- a. To establish and update implementation mechanisms for pilot projects including a method of selection, implementation support and evaluation considering relevant urban transportation policies of related agencies in JABODETABEK;
- b. To implement a pilot project which is expected to be conducted in all 9 (nine) *Kota/Kabupaten* in JABODETABEK area;
- c. Evaluate the results of the pilot project implementation; and
- d. To develop recommendation containing lessons learned from the result of the implementation of the pilot project.

JUTPI 2 team visited all nine *Bappeda* in each *Kota/Kabupaten* in JABODETABEK and delivered information of the goals and objectives of pilot project as well as its criteria for the submission of the proposal from each *Kota/Kabupaten*. It is expected that each *Kota/Kabupaten* can propose a pilot project activity based on the coordination and consensus from relevant agencies by taking account the criteria and parameters set by JUTPI 2.

In this activity, projects which can be implemented within the specified criteria were selected. The activities include the tender process for the selection of local consultant and local

contractor, designing stage, series of meetings with the local government, site survey including soil investigation survey and pre-implementation survey (related to the traffic and pedestrian counting), construction of a public facilities, the inspection process, post-implementation survey and handover process.

The pilot project was divided into several activities with the following implementation schedule.

Table 7 Pilot Project Activity Schedule

No.	Activities	2017				2018												2019									
		9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	
1	Socialization to <i>Bappeda</i>	■	■	■	■																						
2	Proposal Submission		■	■	■																						
3	Review and Selection				■	■	■	■	■	■	■	■	■	■	■	■											
4	Pre-implementation									■	■	■	■	■	■												
5	Implementation															■	■	■	■	■	■	■	■	■	■	■	
6	Evaluation																								■	■	
7	Hand over the facilities																								■	■	

Source: JUTPI 2

4.2 Urban Transportation Policy Analysis from Local Government

In order to obtain proposals that are suitable with the needs of each *Kota/Kabupaten*, JUTPI 2 ask all *Kota/Kabupaten* to submit pilot project proposal based on the coordination and consensus from relevant agencies by taking account the criteria and parameters set by JUTPI 2, such as:

- a. Promoting public transportation usage;
- b. The project should be accomplished within Rp 1 billion of pilot project’s budget ceiling which cover preparatory work, design consultation, construction and evaluation;
- c. The pilot project must be implemented on the land owned by the local government and not located on land owned by residents and/or other institutions other than the local government;
- d. Pilot project activities must avoid land acquisition and relocation;
- e. The pilot project can bring direct benefit to public transportation users; and
- f. Pilot project must have a project sustainability plan, both in terms of operation and

maintenance.

In case of the submission of pilot project proposals, it is expected that each *Kota/Kabupaten* can consider it according to their needs, conditions, and local transportation policies.

Generally, in the regional development plan, the policy of providing transportation facilities is a mandatory subject to be fulfilled by the *Kota/Kabupaten* government for the community. With the implementation of pilot project, the local government can propose an activity to provide transportation facilities within specified requirements while improving coordination between related agencies.

4.3 Proposals from Local Government

JUTPI 2 provides an opportunity for each *Kota/Kabupaten* to carry out coordination between related agencies before submission of pilot project proposal. It is expected that the proposal is a result from the concerned agencies analysis, agreement and consensus, so that the pilot project facility which is to be handed over to them can be managed and maintained properly. The proposed pilot project from nine *Kota/Kabupaten* in JABODETABEK are shown in Table 8.

4.4 Evaluation of Candidate of Pilot Projects

After JUTPI 2 receive pilot project proposals from all *Kota/Kabupaten*, JUTPI 2 together with The CMEA conduct a review and assessment process to select the most appropriate proposal which meet the required criteria and parameters. JUTPI 2 assessing the feasibility of the proposed pilot projects by examining following criteria:

1. Feasibility of the projects in term of cost;
2. Active participation from the respected local government; and
3. Completeness of secondary data (such as underground utilities data, etc.)

The selected proposal of pilot project was announced in JCC Meeting 19 April 2018. The selected seven proposals from *Kota/Kabupaten* are as follows:

Table 8 Candidate of Pilot Projects from 9 Kota/Kabupaten and Selection Results

No	City/Regency	Proposals from Local Government	Pilot Project Selection Results
1	DKI Jakarta	Pedestrian facilities at MRT Station in Blok M	Provision of wayfinding board for the pedestrian in the Jatinegara area (9 locations).
2	Kota Bogor	Park and ride facilities at Sukaesmi Station	Pedestrian path improvement in <i>Jalan Pajajaran</i> (Baranangsiang Bus Terminal area).
3	Kabupaten Bogor	Connection tunnel at Cibinong Station	Provision of a bus shelter in <i>Jalan Raya Bogor</i> near Cibinong Station.
4	Kota Depok	Pedestrian facilities at Pondok Cina Station	Provision of bus shelters and pelican crossing in <i>Jalan Ir. H Juanda</i> (Saminten side and Sugutamu side).
5	Kota Tangerang	Three bus shelters along Benteng Betawi Road	Provision of the pedestrian bridge over the canal in <i>Jalan Benteng Betawi</i> , pelican crossing and pedestrian path improvement near Tanah Tinggi station.
6	Kabupaten Tangerang	Parking facility at Tigaraksa Station	Not selected as a result of the evaluation
7	Kota Tangerang Selatan	Increase the road capacity and traffic management improvement at the level crossing Pondok Ranji Station	Provision of shelter in <i>Jalan Cendrawasih</i> near Jurang Mangu Station.
8	Kota Bekasi	Park and ride at Bekasi Timur Station	Provision of a bus shelter and road separator in front of Bekasi Timur Station.
9	Kabupaten Bekasi	Park and ride at Telagamurni Station	Not selected as a result of the evaluation

Source: JUTPI 2

4.5 Pilot Projects Implementation

4.5.1 Pre-Implementation

For the planning and supervision consultant who is in charge of developing the conceptual design, technical drawing, supervising the contractor during the construction period, through the tender process, JUTPI 2 has appointed local consultant as a planner and supervisor consultant. The consultant carries out design work based on the submitted

proposals and conduct several discussions and consultations with each *Kota/Kabupaten* to get appropriate design results.

In the pre-implementation stage, topography survey and soil investigation are carried out with the purpose to obtain information related with the elevation of points on the project site to be presented as a contour lines on a plot, while soil investigation implemented to determine the bearing capacity of the soil to be utilized for the foundation calculation.

In this stage, the consultant carrying out preliminary survey activities to obtain information about traffic conditions, number of facility users as well as information about opinions from the local community and users regarding the plan to build pilot project facility in that location. This survey is important as part of the evaluation (before and after condition) after the construction work completed.

During this stage, JUTPI 2 and the consultant also carry out contractor bidding and selection (tender) process to appoint the contractor, and as a result, JUTPI 2 appointed local contractor as a contractor to implement pilot project construction works in seven *Kota/Kabupaten*.

4.5.2 Conceptual Design

1) DKI Jakarta

DKI Jakarta proposed the provision of wayfinding board facilities (nine units) to be installed in the Jatinegara area. This wayfinding board has a concept in the form of a map to show locations and directions to public transport facilities and other public facilities with a radius of 500 meters. In addition, this wayfinding board also contains information on important telephone numbers that can be contacted. Maps are posted on both sides of the wayfinding board, so users from both directions can access the information easily.

2) Kota Bogor

Kota Bogor proposed the re-arrangement of pedestrian paths on the *Jalan Pajajaran*, starting from the exit gate of the Baranangsiang Terminal to the northern side (with

a length of around 160 meters). The concept of pedestrian path re-structuring and re-arrangement is to reduce height differences and make the pedestrian path surface flat from before which has a different surface height due to access to the shopping area. The pedestrian path is also equipped with bollard poles and guiding blocks for blind pedestrians. The re-structuring also includes installation of water channel along the pedestrian path and improvement of sewerage in fast food restaurant area. In addition to pedestrian paths, under the pedestrian bridge also installed park lights to improve pedestrian safety at night.

3) Kabupaten Bogor

Kabupaten Bogor proposed the provision of a bus shelter near Cibinong Station. This bus shelter is made with the concept of the front cover in the form of a glass wall, for user safety. The bus shelter is also equipped with a trash bin, information board with USB charger ports and a place to sit. Lay bays are also made in front of the bus shelter as a public transportation stop so as not to disturb the flow of traffic. In addition to the construction of a bus shelter, at this location an underground water channel restructuring was also carried out.

4) Kota Depok

Similar to Kabupaten Bogor, Kota Depok proposed the provision of bus shelters (2 units) in the Sugutamu side and Saminten side in *Jalan* Ir. H. Juanda. The bus shelter design concept is also similar like in Kabupaten Bogor, with the concept of the front cover using a glass wall, complete with information boards with USB charger port, trash bin and a place to sit. Lay bays are also made in front of the bus shelter for public transportation stops. In addition to the bus shelter, pelican crossing facilities are also installed and equipped with a rumble strip on both sides of traffic directions.

5) Kota Tangerang Selatan

Kota Tangerang Selatan proposed the provision of a bus shelter in *Jalan* Cendrawasih near Jurang Mangu Station. This bus shelter is made with the

concept of front cover in the form of a glass wall, for user safety. The bus shelter is also equipped with a trash bin, information board with USB charger port and a place to sit. Lay bays are also made in front of the bus shelter as a public transportation stop so as not to disturb the flow of traffic.

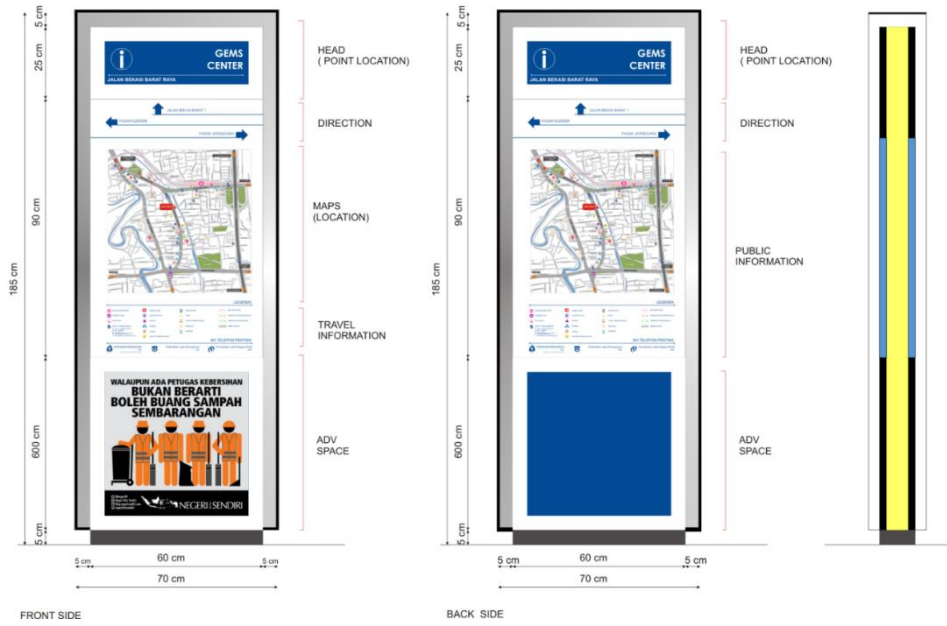
6) Kota Bekasi

Kota Bekasi proposed the provision of a bus shelter facility in *Jalan Ir. H. Juanda* in front of the newly built Bekasi Timur Station. The design concept of bus shelter in Kota Bekasi is similar with bus shelters in other location of pilot project. Different from other locations, bus shelter in Kota Bekasi equipped with a solar panel for the power source. In addition to these facilities, the bus shelter is equipped with a drop off / pick up facility for persons with disabilities. In front of the bus shelter, a road separator is also installed to separate public vehicles that drop off and pick up passengers.

7) Kota Tangerang

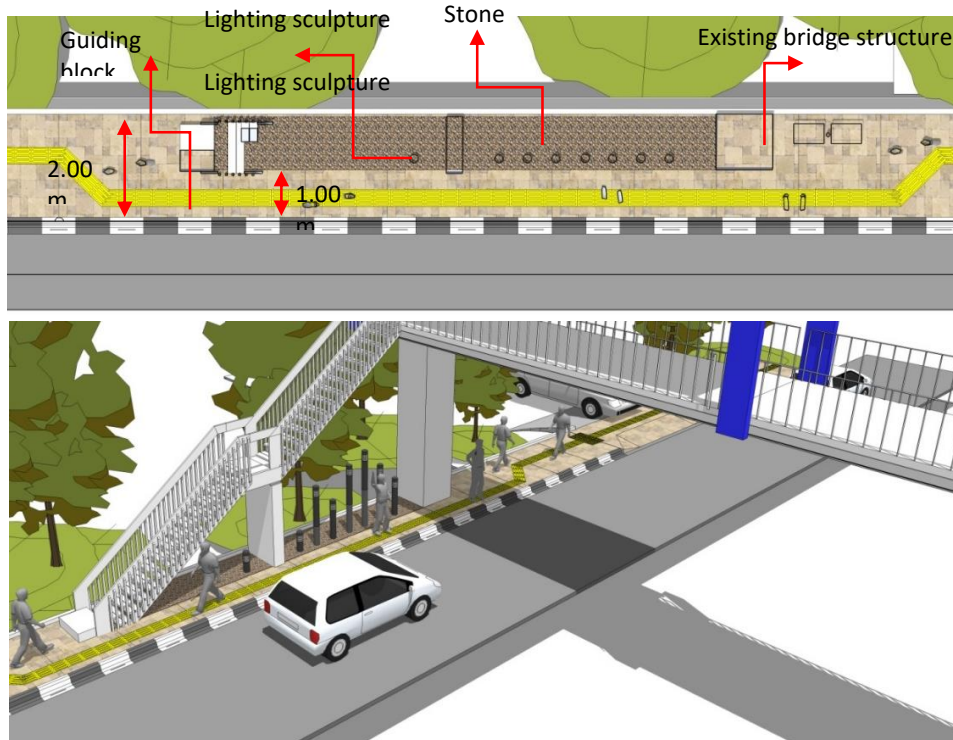
Kota Tangerang proposed the provision of the pedestrian bridge over the water canal, restructuring of the pedestrian path in front of Tanah Tinggi Station, installation of decorative fence along the pedestrian path and pelican crossing facilities on both sides of *Jalan Benteng Betawi*.

After consultation with relevant organizations in each *Kota/Kabupaten*, the final outline design of each proposed pilot project was made to obtain ideas on the design of each facility. Figure 30 until Figure 35 show the conceptual design of each pilot projects in 7 *Kota/Kabupaten*:



Source: JUTPI 2

Figure 30 Conceptual Design of the Wayfinding Board (DKI Jakarta)



Source: JUTPI 2

Figure 31 Conceptual Design of Pedestrian Path Facility (Kota Bogor)



Source: JUTPI 2

Figure 32 Conceptual Design of Bus Shelter Facility (Kabupaten Bogor)



Source: JUTPI 2

Figure 33 Conceptual Design of Bus Shelter Facility (Kota Depok)



Source: JUTPI 2

Figure 34 Conceptual Design of Bus Shelter Facility (Kota Tangerang Selatan)



Source: JUTPI 2

Figure 35 Conceptual Design of Bus Shelter Facility (Kota Bekasi)



Source: JUTPI 2

Figure 36 Conceptual Design of Pedestrian Crossing Bridge Facility (Kota Tangerang)

4.5.3 Implementation Works

After the design concept is approved by the local government and technical drawings as well as calculation of work items are approved by JUTPI 2, then a local contractor began to carry out construction work on December 18, 2018. In accordance with the timeline for the project implementation schedule, all physical works were completed on July 10, 2019.

The result of implementation works in seven *Kota/Kabupaten* are as follows:

(1) DKI Jakarta

Implementation works for the provision of wayfinding board in Jatinegara area was carried out in nine locations. The construction works start from January 6, 2019 and completed on May 27, 2019.



Source: JUTPI 2

Figure 37 Work Implementation in Jatinegara Area

(2) Kota Bogor

Implementation works for the improvement of pedestrian path in Jalan Pajajaran near Baranangsiang Bus Terminal area with the length of 150 m was started from March 20, 2019 and completed on May 29, 2019.



Source: JUTPI 2

Figure 38 Before and After Condition in the Construction Site (Kota Bogor)

(3) Kabupaten Bogor

Implementation works for the provision of bus shelter facility in Jalan Raya Bogor near Cibinong Station was started from February 7, 2019 and completed on May 29, 2019.



Source: JUTPI 2

Figure 39 Completed Bus Shelter Facility in Kabupaten Bogor

(4) Kota Depok

Implementation works for the provision of bus shelter facility and pelican crossing facility in Jalan Ir. H. Juanda in Sugutamu and Saminten area was started from January 29, 2019 and completed on May 29, 2019.



Source: JUTPI 2

Figure 40 Completed Bus Shelter Facility in Kota Depok

(5) Kota Tangerang

Implementation works for the provision of pedestrian crossing bridge facility over the water canal, provision of pelican crossing facility, improvement of pedestrian path and installation of decorative fence in Jalan Benteng Betawi near Tanah Tinggi Station area was started from December 22, 2019 and completed on May 29, 2019.



Source: JUTPI 2

Figure 41 Completed Pedestrian Crossing Bridge Facility in Kota Tangerang

(6) Kota Tangerang Selatan

Implementation works for the provision of bus shelter facility in Jalan Cendrawasih near Jurang Mangu Station was started from March 4, 2019 and completed on May 29, 2019.



Source: JUTPI 2

Figure 42 Completed Bus Shelter Facility in Kota Tangerang Selatan

(7) Kota Bekasi

Implementation works for the provision of bus shelter facility and road separator in Jalan Ir. H. Juanda near Bekasi Timur Station was started from December 27, 2018 and completed on May 29, 2019.

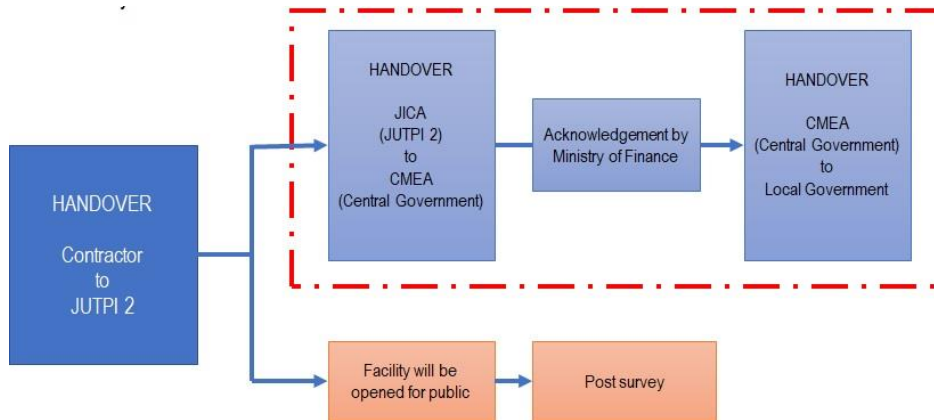


Source: JUTPI 2

Figure 43 Completed Bus Shelter Facility in Kota Bekasi

4.5.4 Handover of Facilities

After the completion of the construction of pilot project facilities, then the facilities handed over to the seven *Kota/Kabupaten*. The handover process refers to the Minister of Finance Regulation No. 111/PMK.06 Year 2016 regarding procedures for the transfer of state's property from the CMEA to the local government.



Source: JUTPI 2

Figure 44 Flow of the Handover of Pilot Project Facility

Before the facility is handed over to the local government, in accordance to the regulation, JUTPI 2 together with general bureau of the CMEA and the local government's related institutions carry out an inspection to the constructed facilities to check the quality and actual condition of each facility, followed by the signing of an official report by the inspection attendees.



Source: JUTPI 2

Figure 45 Handover of Pilot Project Facility from JICA to CMEA



Source: JUTPI 2

Figure 46 Handover of Pilot Project Facility from CMEA to Local Government

After the inspection process was completed, on October 15, 2019, JICA handed over the pilot project facilities to the CMEA, thus, to be handed over to the seven *Kota/Kabupaten* after the CMEA receives the official letter of accepting the pilot project facility from the respective seven *Kota/Kabupaten*. On October 21, 2019, the handover of pilot project facilities from the CMEA to seven *Kota/Kabupaten* was held at the CMEA office.

4.5.5 Defect Inspection Period

In the implementation of pilot project activity, JUTPI 2 set the defect inspection period for all pilot project facilities constructed in seven *Kota/Kabupaten*. Defect inspection period is the time period specified in the contract during which a contractor is legally required to return to the construction site to repair any defects which have appeared in that contractor's work since the completion of the construction.

The defect inspection period is for 12 months, starting after the completion of the pilot project facility, namely, from July 2019 up to July 2020. The quality of the work is inspected and assessed in this period to see if there are defects caused by the quality (minor or major defects) of the construction and further improvements except for the following conditions:

1. Defects of the facility which is done intentionally or vandalism; and
2. Defects due to the loss of parts of the facility (stolen).

During 12 months of the defect inspection period, the supervision consultant together

with the contractor has an obligation to conduct defect inspection four times to check whether there is a defect that must be repaired immediately.

Table 9 Schedule of the 1st Defect Inspection

No.	Kota/Kabupaten	Schedule
1	DKI Jakarta Province	5 September 2019
2	Kota Bogor	6 September 2019
3	Kabupaten Bogor	12 September 2019
4	Kota Depok	5 September 2019
5	Kota Tangerang	4 September 2019
6	Kota Tangerang Selatan	4 September 2019
7	Kota Bekasi	11 September 2019

Source: JUTPI 2



Source: JUTPI 2

Figure 47 Defect Inspection in Pilot Project Location

The 2nd defect inspection is to be implemented on early to mid of December 2019. The 1st defect inspection was already conducted in September 2019, with the results as follows:

Table 10 Result of the 1st Defect Inspection

No.	Kota/Kabupaten	Findings
1	DKI Jakarta	- Wayfinding 1 until 9, cleaning and replace the missing bolt. Replacing sticker on wayfinding 9 (scratch).

No.	Kota/Kabupaten	Findings
2	Kota Bogor	<ul style="list-style-type: none"> - Repair the crack on ramp - Repair the discharge holes in fast food restaurant area - Repair the uneven surface of asphalt in fast food restaurant area - Repair the cracked curb - Replace the broken cover of box culvert - Repaint the paint on bollard <p>Install the monumental plate</p>
3	Kabupaten Bogor	<ul style="list-style-type: none"> - Replacement of sticker on trash bin - Repair the cracked ceiling - Repair the USB cover <p>Install the monumental plate</p>
4	Kota Depok	<ul style="list-style-type: none"> - Repair the cracked ceiling - Repair the broken paint on concrete chair and curb - Install the monumental plate - Repair the broken asphalt <p>Repair the broken part of zebra cross</p>
5	Kota Tangerang	<ul style="list-style-type: none"> - Repair the cracked on the edge of pedestrian crossing bridge - Repair the cracked on the plaster on the pedestrian crossing bridge - Repair the zebra crossing - Repair the cracked foundation of decorative fence - Repair the damage part of decorative fence <p>Repair the push button on pelican crossing</p>
6	Kota Tangerang Selatan	<ul style="list-style-type: none"> - Repair the cracked ceiling - Repair the broken curb - Repair the cracked on the plaster on the pedestrian path - Repair the zebra crossing <p>Install the monumental plate</p>
7	Kota Bekasi	<ul style="list-style-type: none"> - Repair the cracked ceiling - Repair the broken curb on the road separator - Repair the zebra crossing - Repair the electrical lighting system <p>Install the monumental plate</p>

Source: JUTPI 2

4.6 Evaluation of Pilot Project Implementation

4.6.1 Evaluation on the Process of Pilot Project Implementation

During the process of pilot project implementation, JUTPI 2 has found matters that can be used as an evaluation for all stakeholders.

1) Coordination Between Related Institutions/Agencies

In the pre-implementation stage, good coordination among related parties is needed, especially those related to the utilities beneath the project site. Utilities at the project site are under the authority of various parties, both from government agencies and the private sector. Good synergy is needed so that in the future if there are plans to develop a transportation facility, the utilities issue could be properly coordinated.

2) Permission Process Related with the National Road

Some of the pilot projects such as in Kota Bogor, Kota Depok and Kabupaten Bogor are located on national road, where the authority is under the Central Government (National Road Implementation Agency/*Balai Besar Pelaksanaan Jalan Nasional*/BBPJN VI). The development of facilities that are carried out in the national road need special process refer to the circular letter from the Directorate General of Bina Marga No. 01/SE/Db/2017 regarding permit procedure for the utilization of national road.

In case of permission process to the BBPJN VI, due to the lack of understanding on the permission procedures, this has resulted in delays in some of the pilot project preparation process, such as Kota Bogor, Kota Depok and Kabupaten Bogor, which has resulted in the delay in the construction work implementation schedule.

3) Clarification of the Land Ownership Status

The unclear land ownership status is also an important thing to evaluate, considering that if there are parties who claim to have rights over the land at the project site, this will affect the schedule of the planned construction preparation process. It is important that the local government ensures the land ownership status at the project site.

4.6.2 Evaluation of the Result of Pilot Project Implementation

Evaluation on the result of the pilot project implementation was obtained from the result of the post-implementation survey. The main purpose of the post-implementation survey is to capture feedback from the respondents, in order to evaluate the impact as well as the effectiveness of the pilot project facility through the interview survey.

The post-implementation survey was conducted in all pilot project facilities, with the schedule as bellow.

Table 11 Post-Survey Implementation Schedule

No.	Kota/Kabupaten	Survey Date	Number of Respondents	List of survey
1	DKI Jakarta	8 & 10 September 2019	200	Opinion survey
2	Kota Bogor	25 & 27 August 2019	200	Opinion survey and pedestrian counting
3	Kabupaten Bogor	1 & 3 September 2019	200	Opinion survey and pedestrian counting
4	Kota Depok	18 & 20 August 2019	200	Opinion survey, vehicle and pedestrian counting
5	Kota Tangerang	25 & 27 August 2019	200	Opinion survey, vehicle and pedestrian counting
6	Kota Tangerang Selatan	1 & 3 September 2019	200	Opinion survey and vehicle counting
7	Kota Bekasi	18 & 20 August 2019	200	Opinion survey and vehicle counting

Source: JUTPI 2



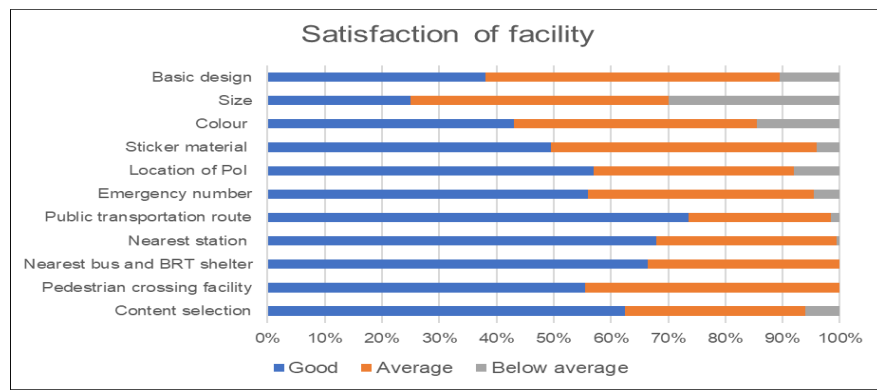
Source: JUTPI 2

Figure 48 Post-Survey Activity in Pilot Project Location

In the post-implementation survey, several questions related with the existence of new pilot project facility as well as its direct impact to the users are asked via questionnaire. The following figures showing the overall result of the post-implementation survey implemented in seven *Kota/Kabupaten*.

1. The Satisfaction of Overall Facility

Based on the result of the post-implementation survey, all the pilot project facilities get positive feedback. However, respondents in almost all the pilot project location are concerned about the cleanliness of the facilities.

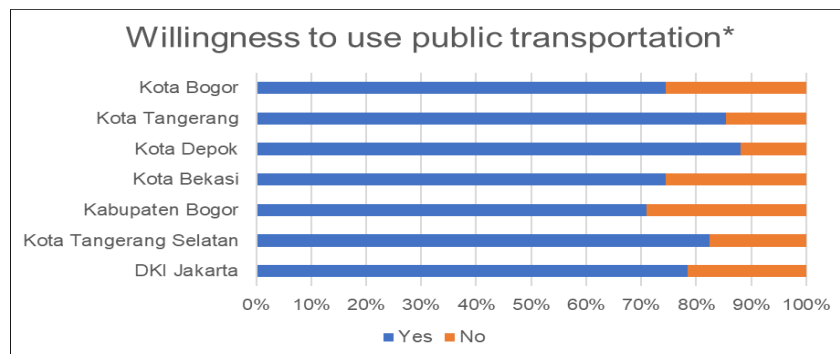


Source: JUTPI 2

Figure 49 Respondent’s Satisfaction Rate

2. Willingness to Use Public Transportation

In terms of the willingness to use public transportation, overall, more than 70% of the respondents are willing to use public transportation due to the improvement of accessibility, comfort, and safety.

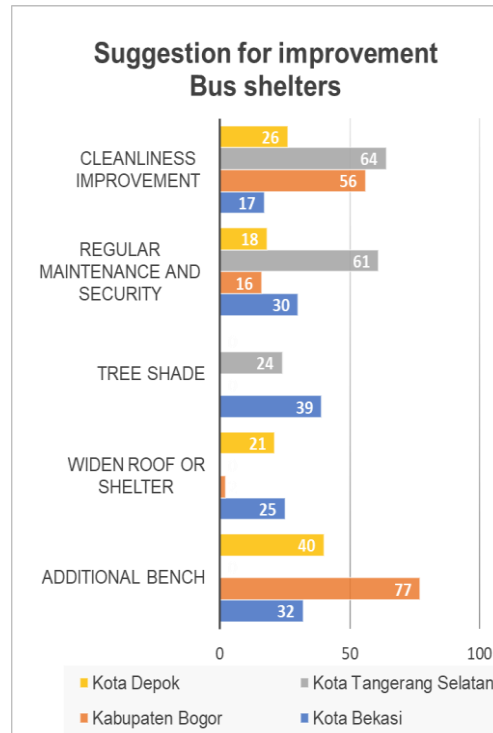


Source: JUTPI 2

Figure 50 Willingness to Use Public Transportation

3. Suggestions for Improvement

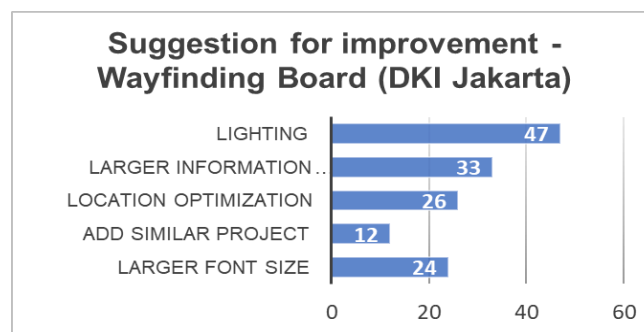
For bus shelter, from 200 respondents in Kota Tangerang Selatan, 64% are concerned about the improvement on the cleanliness, while 61% of the respondents expecting improvement on regular maintenance and security.



Source: JUTPI 2

Figure 51 Suggestion of Improvement for Bus Shelter

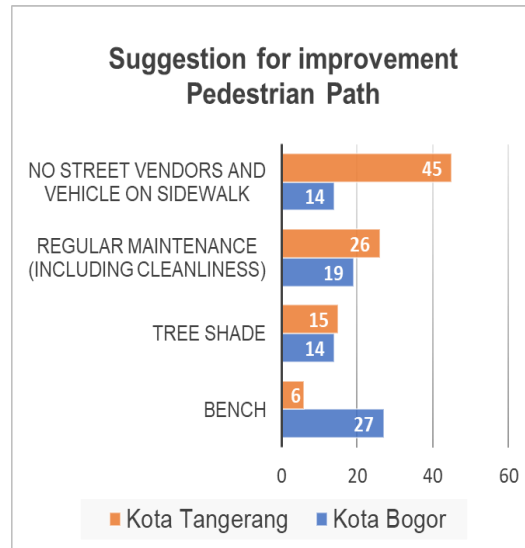
For wayfinding board, from 200 respondents in DKI Jakarta, 47% suggested lighting, and 33% suggested larger information on the wayfinding board.



Source: JUTPI 2

Figure 52 Suggestion of Improvement for Wayfinding Board

For pedestrian path, from 200 respondents in Kota Tangerang, 45% are concerned about the comfort and safety (no street vendors and vehicles on the sidewalk), while 26% are expecting an improvement in regular maintenance (including cleanliness).



Source: JUTPI 2

Figure 53 Suggestion of Improvement for Pedestrian Path

4.7 Development of Recommendation from the Pilot Projects Implementation Result

Based on the issues and findings through the implementation of the pilot project and the evaluation results of the pilot project, recommendations containing lessons learned from pilot project activity were developed and then to utilize it for the future transport policy in JABODETABEK. The recommendations from pilot project activities can be seen in the following explanation.

1) Strengthening coordination among relevant stakeholders

As previously stated, JABODETABEK's transportation policy has a cross-sector structure between agencies and between regions, so it is necessary to improve coordination between related stakeholders, both between related agencies at the local government level and with related agencies at the central government level, in particular, in terms of inconsistencies in permission procedures.

2) Encouraging local community's involvement to maintain the facility

One of the main issues that arise based on the evaluation of pilot project implementation is about how to maintain the facility that have been built. Community participation is

necessary to be encourage, given the limitations of the local government, both in terms of funds and human resources to maintain the facility.

3) The Readiness of the Local Government

Pilot project facilities that have been built need to be maintained, so that the service life of the facilities can be maximally extended to be used by the community. In this case, the local government must prepare and secure operation and maintenance cost and supervision for the proper usage of the facilities.

4) Implementing Similar Projects

It is expected that from the experience, lesson learnt and best practices from pilot project implementation, the local government can implement similar activities to develop transportation facilities in other locations. Through improvements in terms of coordination and planning, it is hoped that the facility development process can be implemented smoothly.

Chapter 5 Enhancement of the Capacity to Implement TOD Project

5.1 Overall Project and Activities

Activity 3 aims to enhance capacity of urban transportation related agencies to implement Transit-Oriented Development (TOD) projects in JABODETABEK. According to the Project Design Matrix (PDM) written in Record of Discussion (RD) of JUTPI 2, there are eight activities as follows,

- 3-1. To analyze TOD-related policies of related agencies in JABODETABEK TOD-related laws and regulations evaluation;
- 3-2. To review existing TOD related laws and regulations of related agencies in JABODETABEK and prepare necessary modification to current law and outlines of new regulations;
- 3-3. To identify the demarcation among ministries/organization concerned and support necessary coordination by CMEA for necessary legislation;
- 3-4. To prepare and update implementing plan of TOD model project(s) (i.e. survey, financial source and evaluation);
- 3-5. To strengthen the institutional development capacity to implement the TOD model project(s);
- 3-6. To support (some stage of) implementation of the TOD model project(s);
- 3-7. To evaluate the result of the TOD model project(s); and
- 3-8. To develop recommendation containing lessons learned from the result of the implementation of the TOD model project(s).

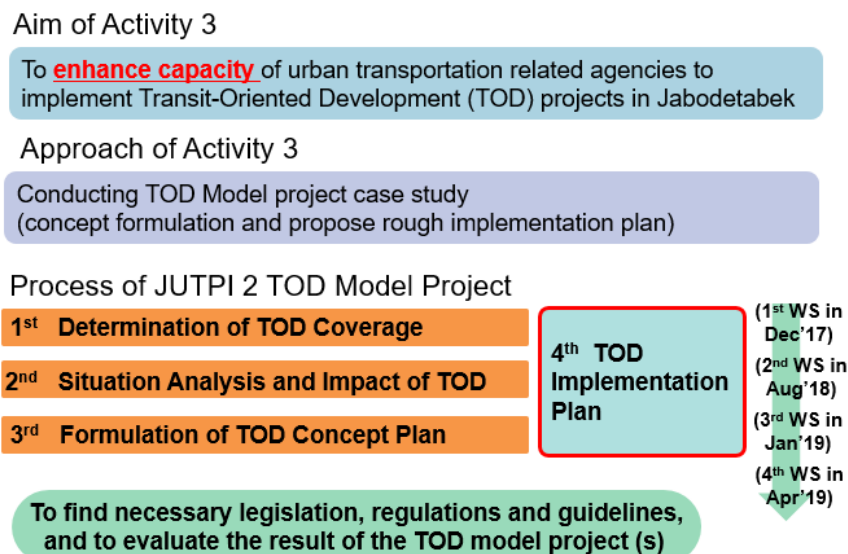
At the beginning of the project, it was found that it was difficult to realize an actual project due to time limitations and budget constraints. JUTPI 2 team discussed with the Indonesian side and agreed to conduct capacity building to get the knowledge of the TOD concept plan and implementation plan of making a TOD model project through a series of TOD workshops.

Lessons learned from the model project and results of discussion were reflected into recommendations for effective planning and implementation of TOD.

At the end of the project, results of Outcomes of eight activities in RD were compiled into three outputs (reports) as below.

1. Output 1: Report on review laws, plans and regulation (in correspondence with activities 3-1, 3-2, 3-3).
2. Output 2: Report on guidance of TOD concept plan and implementation plan formulation of TOD model project (in correspondence with activities 3-4, 3-5, 3-6, 3-7, 3-8).
3. Output 3: Report on TOD workshop proceeding (in correspondence with activities 3-5).

TOD model project was conducted in four steps i.e. (1) determination of TOD coverage area, (2) TOD situation analysis and impact; (3) formulation of TOD concept plan; and (4) TOD implementation plan. Output of each step was exposed through workshops and discussion. Overall project and activities can be depicted in the figure below.



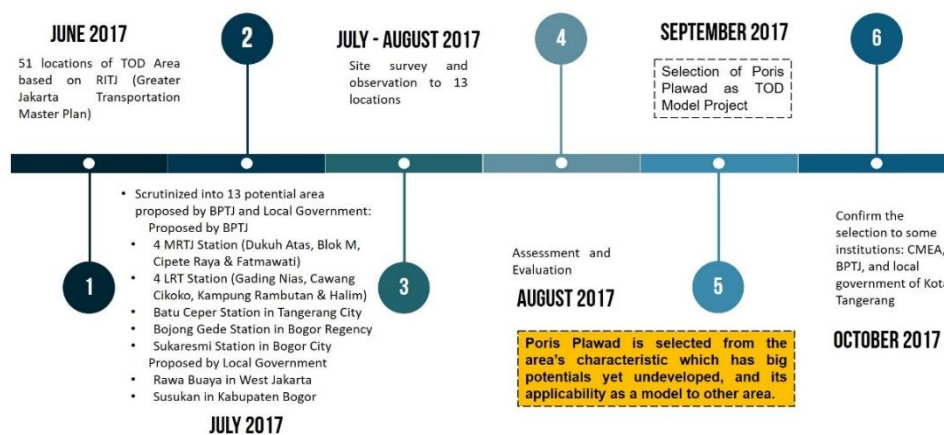
Source: JUTPI 2

Figure 54 Overall Project and Activities

To support the development of TOD in an appropriate way, the case study of TOD model project in JUTPI 2 is expected to give an impact and benefit for urban development in relation with urban mass transportation system. In response to those issues, BPTJ under the Ministry of

Transportation coordinated with Ministry of ATR/BPN determined 54 potential locations spread across JABODETABEK. From those locations mentioned in the JABODETABEK Transportation Masterplan (RITJ), 11 locations have been prioritized to be studied further as a pilot project for TOD area development. Overall model project location selection can be depicted in the flow chart below.

1. SELECTION PROCESS OF TOD MODEL PROJECT IN PORIS PLAWAD



Source: JUTPI 2

Figure 55 Selection Process of TOD Model Project Area Location

There are 13 TOD locations proposed (11 by BPTJ, 2 by local government), consist of:

1. From BPTJ:

- a. Four mass rapid transit (MRT) Jakarta stations namely Dukuh Atas, Blok M, Cipete Raya, and Fatmawati;
- b. Four light rail transit (LRT) Jakarta stations namely Gading Nias, Cawang Cikoko, Kampung Rambutan, and Halim;
- c. Three commuter line (CL) stations namely Batu Ceper in Kota Tangerang, Bojong Gede in Kabupaten Bogor, and Sukaresmi station in Kota Bogor.

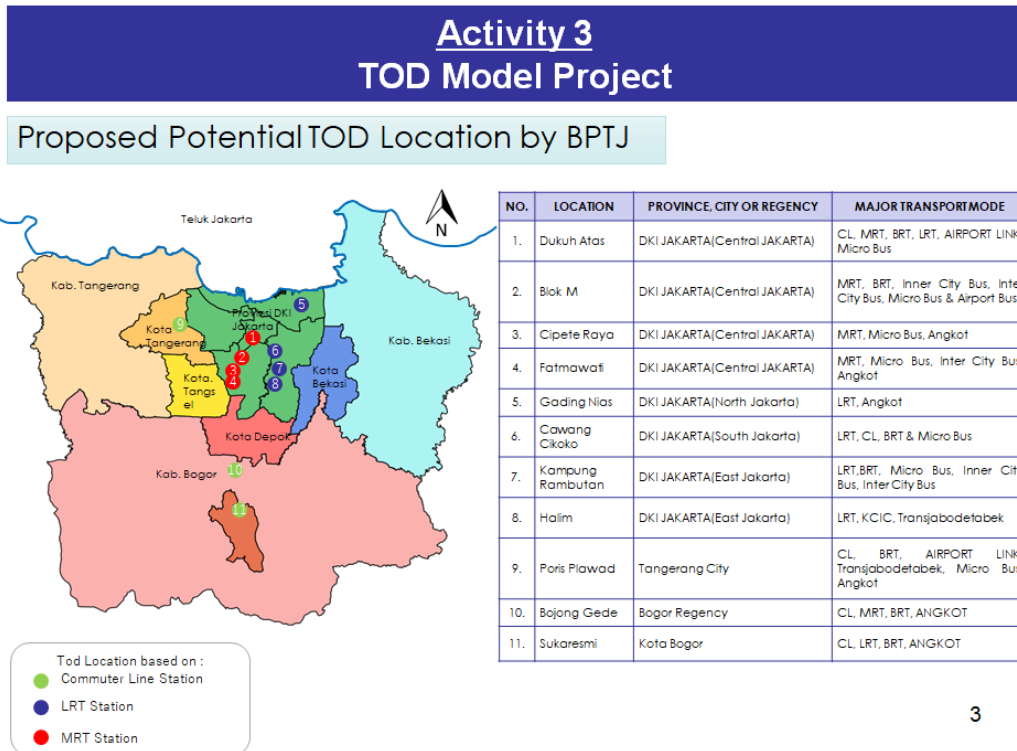
2. From local government:

- a. Local Government of DKI Jakarta: Rawa Buaya Bus Terminal in West Jakarta;
- b. Local Government of Kabupaten Bogor: Susukan (proposed commuter line station).

Table 12 Proposed Locations for TOD Model Project

No	Proposed Locations	Regions	Major Transport Mode
Proposed Locations by BPTJ			
1	Dukuh Atas	DKI Jakarta (Central Jakarta)	CL, MRT, BRT, LRT, AIRPORT LINK, Micro Bus
2	Blok M	DKI Jakarta (Central Jakarta)	MRT, BRT, Inner City Bus, Inter City Bus, Micro Bus & Airport Bus
3	Cipete Raya	DKI Jakarta (Central Jakarta)	MRT, Micro Bus, Angkot
4	Fatmawati	DKI Jakarta (Central Jakarta)	MRT, Micro Bus, Inter City Bus, Angkot
5	Gading Nias	DKI Jakarta (North Jakarta)	LRT, Angkot
6	Cawang Cikoko	DKI Jakarta (South Jakarta)	LRT, CL, BRT & Micro Bus
7	Kampung Rambutan	DKI Jakarta (East Jakarta)	LRT, BRT, Micro Bus, Inner City Bus, Inter City Bus
8	Halim	DKI Jakarta (East Jakarta)	LRT, KCIC, TransJABODETABEK
9	Poris Plawad	Tangerang City	CL, BRT, Airport Link, TransJabodetabek, Micro Bus, Angkot
10	Bojong Gede	Bogor Regency	CL, MRT, BRT, Angkot
11	Sukaesmi	Bogor City	CL, LRT, BRT, Angkot
Proposed Locations by Local Government			
12	Rawa Buaya	DKI Jakarta (West Jakarta)	CL, BRT, Angkot
13	Susukan	Bogor Regency	CL, Angkot

Source: JUTPI 2



Source: JUTPI 2

Figure 56 Proposed Potential TOD Locations by BPTJ

In addition, *Dinas Perhubungan* DKI Jakarta proposed another location in the Rawa Buaya area as a bus terminal and *Bappeda* Kabupaten Bogor proposed the Susukan area as a commuter line station plan for further study.

From those potential TOD locations, JUTPI 2 provide advice and input by identifying the TOD area characteristics with several investigation viewpoints, which consist of:

1. Effectiveness of public transport enhancement;
 - a. Will the project promote the enhancement of public transportation?
 - b. Play an important role to reduce traffic congestion.
 - c. Will do not cause another problem or traffic congestion.
2. Position in Local Government's policy;
 - a. Importance in the local government's spatial planning policy.
 - b. Importance in the local government's transportation policy.
3. Project site's location characteristics;
 - a. Project site's location appropriateness

4. Applicability to be implemented for another project; and
5. Economic & social impact.



Source: JUTPI 2

Figure 57 Model Project Investigation View and Evaluation Point

From the site investigation, summary of viewpoints and can be described in tables of investigation sheet. Those investigation viewpoints have been analyzed and come up with an evaluation result as described in Table 13.

Table 13 Evaluation Point Result of Proposed TOD Model Project

TOD COMPARISON TABLE

No	Location	1. Effectiveness of Public Transport Enrichment			2. Position in Local Government's Policy			3. Location			4. Applicability for another project			5. Economic and social impact	Result	Difficulties level	Additional Information
		a. Will the project promote an enrichment of public transport	b. Play important role to reduce traffic congestion	c. Won't cause another problem or traffic	a. Importance in the Local Government's spatial planning policy	b. Importance in the Local Government's transportation policy	a. Project sites location appropriate	b. Project sites location has a good potential	4. Project sites location appropriate	4. Project sites location has a good potential							
1	Dukuh Atas	⊙	⊙	△	⊙	⊙	△	⊙	⊙	⊙	⊙	⊙	⊙	⊙ = 7 ○ = 1 △ = 1	Very High	Not very applicable because of the land limitation, land prices, and overlap study with MRTJ	
2	Blok M	⊙	⊙	○	⊙	⊙	○	⊙	⊙	○	○	○	⊙	⊙ = 6 ○ = 3 △ = 0	High	Limited for TOD implementation because it's difficult to provide spaces and demolish buildings and land ownership will be the social issue	
3	Cipete Raya	⊙	⊙	○	○	○	○	○	○	○	○	○	⊙	⊙ = 4 ○ = 5 △ = 0	High	TOD model project has been conducted by MRTJ, and the location is not very potential because of the narrow road and TOD model will have a big impact to reduce traffic congestion, but it needs a lot of effort for asset transfer.	
4	Fatmawati	⊙	○	△	○	○	△	○	○	○	○	○	⊙	⊙ = 4 ○ = 4 △ = 1	High	Not very applicable because it is located on the developed area and there is no big potential for expansion.	
5	Gading Nias	⊙	⊙	⊙	○	○	⊙	○	○	○	○	○	⊙	⊙ = 4 ○ = 5 △ = 0	High	Distance between LRT proposed station and Commuter Line Station quite far (approximately 500 M)	
6	Cawang Cikoko	⊙	○	○	○	○	○	○	○	○	○	○	⊙	⊙ = 2 ○ = 4 △ = 3	High	Proposed by MOT there will be a mixed land use in the Bus Terminal of Kampung Rambutan (Residential + Commercial)	
7	Kampung Rambutan	⊙	○	○	△	△	○	△	△	△	△	△	⊙	⊙ = 0 ○ = 5 △ = 4	Very High	Agreement between Airforce Military and PT. KCIC regarding 250 unit military house relocation	
9	Poris Plawad	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙ = 9 ○ = 0 △ = 0	High	There will be 2 New BRT Corridors through Poris Plawad	
10	Bojong Gede	⊙	⊙	○	○	○	○	○	○	○	○	○	⊙	⊙ = 7 ○ = 2 △ = 0	High	Tunnel (in the station) to pass railway for commuter line user is under construction	
11	Sukaresmi	○	△	△	△	○	△	△	△	△	△	△	○	⊙ = 0 ○ = 4 △ = 5	Medium	Train station is not under construction	
12	Rawa Buaya	⊙	⊙	○	△	△	△	△	△	△	△	△	○	⊙ = 2 ○ = 3 △ = 4	Medium	Bus Terminal is not under construction	
13	Susukan	○	△	○	△	△	△	△	△	△	△	△	○	⊙ = 0 ○ = 4 △ = 5	Medium	Train station is not under construction	

⊙	Very Good
○	Good
△	So - so

Source: JUTPI 2

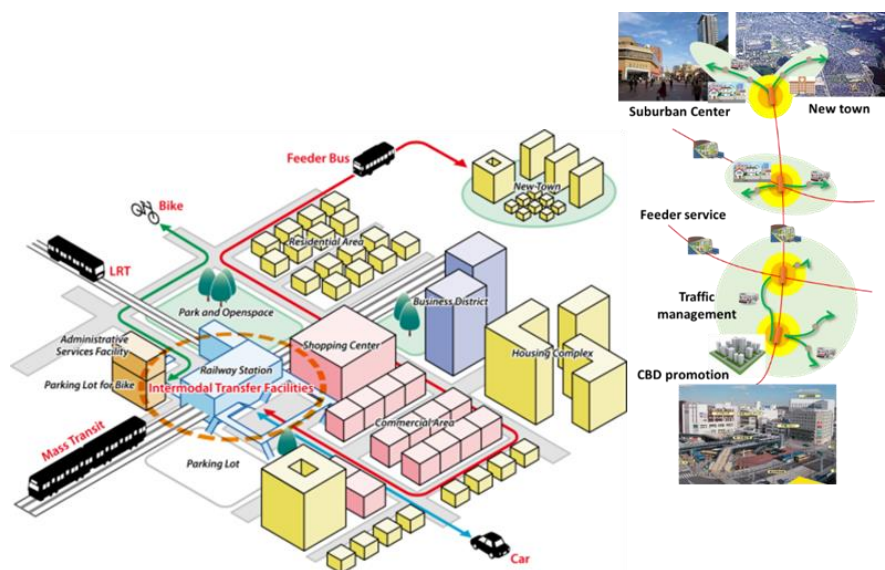
Based on the evaluation point results above, it was obtained that Poris Plawad area has been categorized as the most fulfill criteria that are explained at the investment point. By following the result, JUTPI 2 select Poris Plawad to be a study case as a TOD Model Project and make an announcement to CMEA, BPTJ, BAPPENAS, and Local Government of Kota Tangerang. After the location has been selected and approved by the main counterparts and local government, then the process continued to conduct a case study.

5.2 Basic Concept of TOD

5.2.1 Basic Concept of TOD in Japan

TOD is an urban development issue that is often regarded as a solution to reduce traffic congestion and to achieve land efficiency. TOD generates enormous economic, financial, social, and environmental benefits, with the following objectives:

1. TOD is to ensure mobility and accessibility to services and activities (transport);
2. TOD is to promote compact and energy efficient urban spatial structure (land use);
3. TOD is to enhance urban development opportunities at and around the stations (urban development).



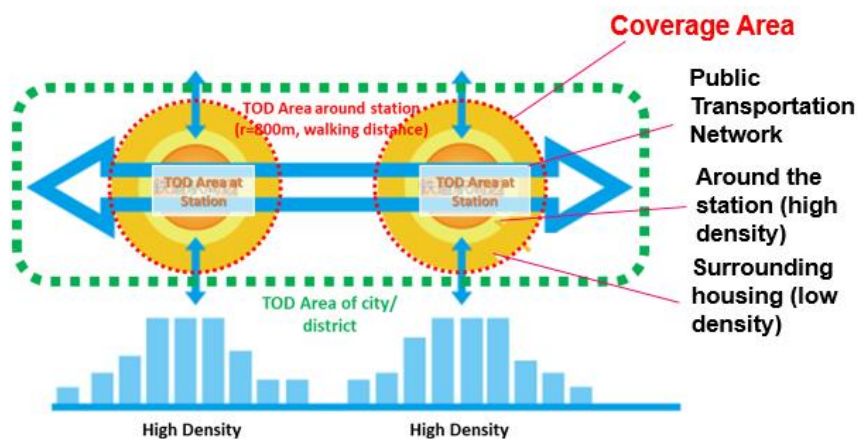
Source: JUTPI 2

Figure 58 TOD around Station

On the guideline stipulated by The Minister of Agrarian and Spatial Plan, TOD is defined as an area development concept around the transit node which integrates public transit and non-motorized transport with a mixed-use development in medium to high intensity.

The general concept of area development around the station is as follows.

- Commercial facilities and business buildings are developed intensively in the vicinity of the station.
- The residential area can be developed in the area where outside of walkable distance from the station.
- A compact city that is easy to use public transportation and not too much dependent on private vehicles can be realized.



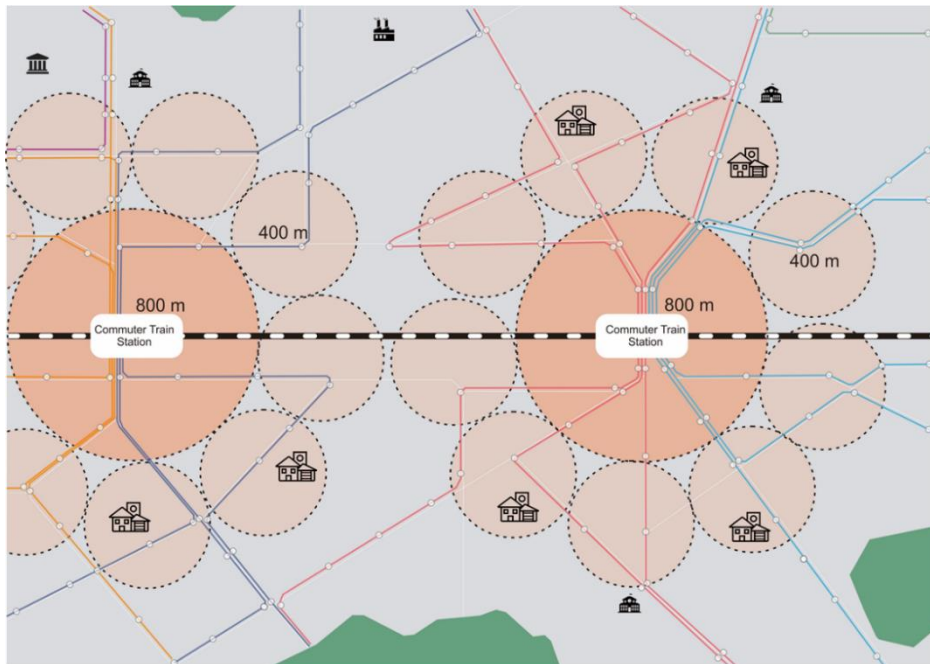
Source: JUTPI 2

Figure 59 Concept of TOD Area Development

The basic idea of TOD radius can be described in the following

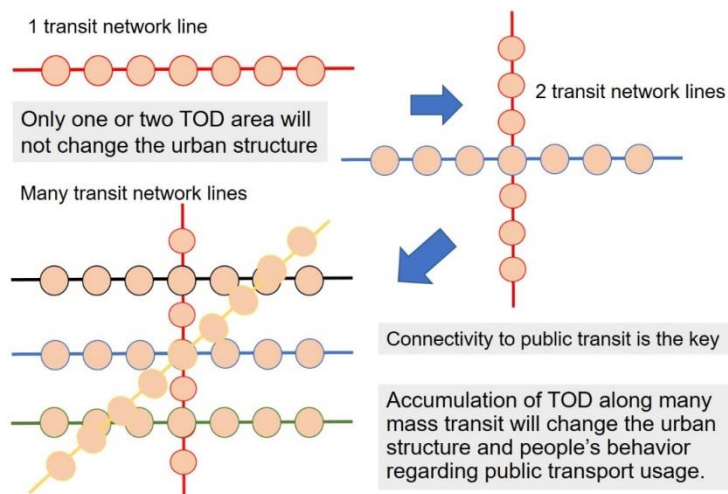
1. Walkable distance (approximately 10 minutes' walking would be limit ($\approx 80 \text{ m} / 1 \text{ minute} \times 10 = 800\text{m}$)).
2. Outside of 800 m covered by feeder transport.
3. The distance from the house to the nearest bus stop should be 0 m to 400 m.
4. The average distance between stations varies from 1 km to 2 km (Japanese private railways).

5. Travel time from house to station is the benchmark of public transport service coverage area of each city (e.g. Arrive at nearest station in less than 15 minutes by using any mode (walking, bicycle and bus).
6. Consideration of height difference is necessary to set feeder transport route.



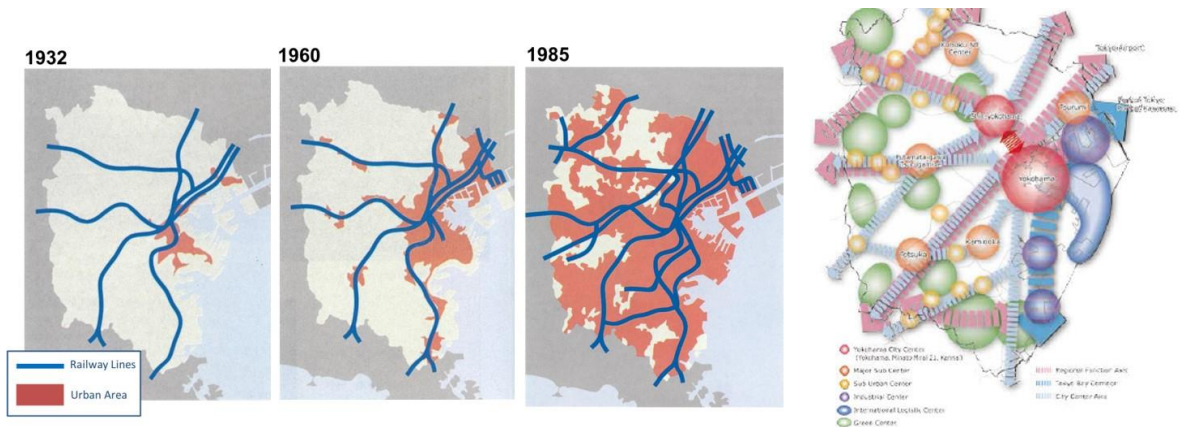
Source: JUTPI 2

Figure 60 Basic Idea of Walkability Radius



Source: Yokohama City (Railroad Network/Urbanization Map), JUTPI 2 (Urban Structure Map)

Figure 61 Basic Idea of TOD Radius and Urban Structure



Source: Yokohama City (Railroad Network/Urbanization Map), JUTPI 2 (Urban Structure Map)

Figure 62 Example of Railway Network Expansion with TOD Promotion in Yokohama

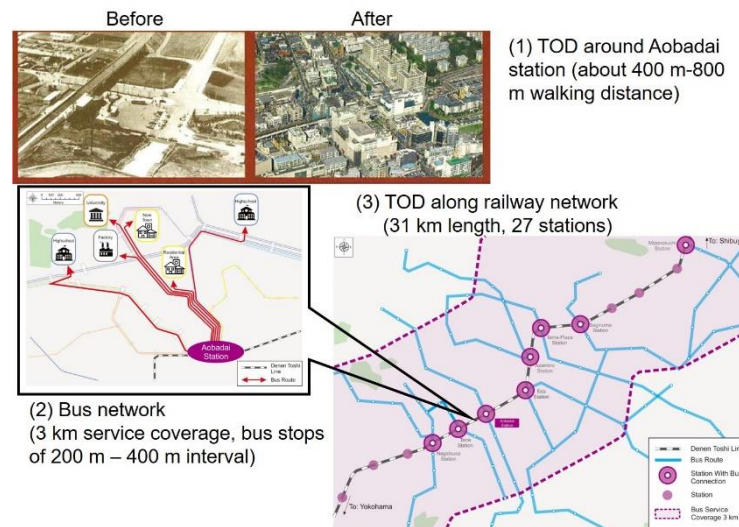
Only one or two TOD areas may not change the urban structure, but the accumulation of TOD along many mass transits will change the urban structure and people’s behavior regarding public transport usage. Therefore, access and connectivity to the transit station is the key.

The coverage area of 800 m radius as the walkable area from each railway station in the Tokyo Metropolitan Area is shown in Figure 63.



Source: Nikken Sekkei

Figure 63 Concept of TOD Metropolis as Complex of Walk-able Urban Cells with Stations

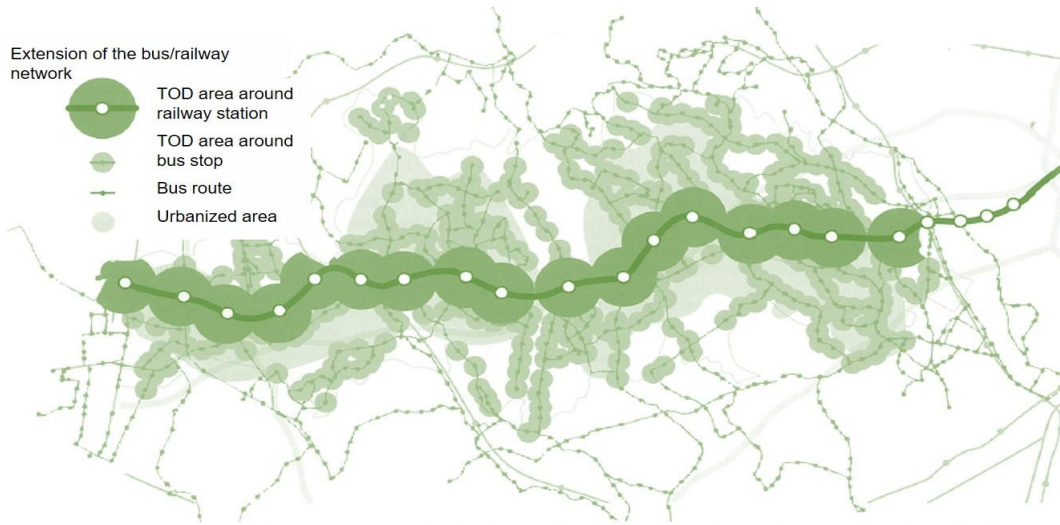


Source: Yokohama City (Railroad Network/Urbanization Map), JUTPI 2 (Urban Structure Map)

Figure 64 Example of Aobadai Station Area of Denen Toshi Line

Since there are many mass transits in Tokyo, therefore, walkable area covers most of the area. Expanding public transport network centered on mass transit is necessary to realize the TOD philosophy throughout the JABODETABEK area. If the coverage area of an 800m radius is expanded and many people can reach the station by walking or bicycle, public transportation modal share is expected to increase.

Around 400 m-800 m radius can be reached by walking, but for the area outside coverage of 800 m – 3 km from the station, the access to the station will be by bus network with interval of bus stops is 200 m – 400 m and walking to the nearest bus stop. Below is another example of new town along railway network of Denen Toshi Line in Tama Garden City. Figure 65 shows that even outside of TOD area from railway station, there are small TOD area can be found around bus stop which is served as feeder transport, so TOD area is not limited only around the railway station.

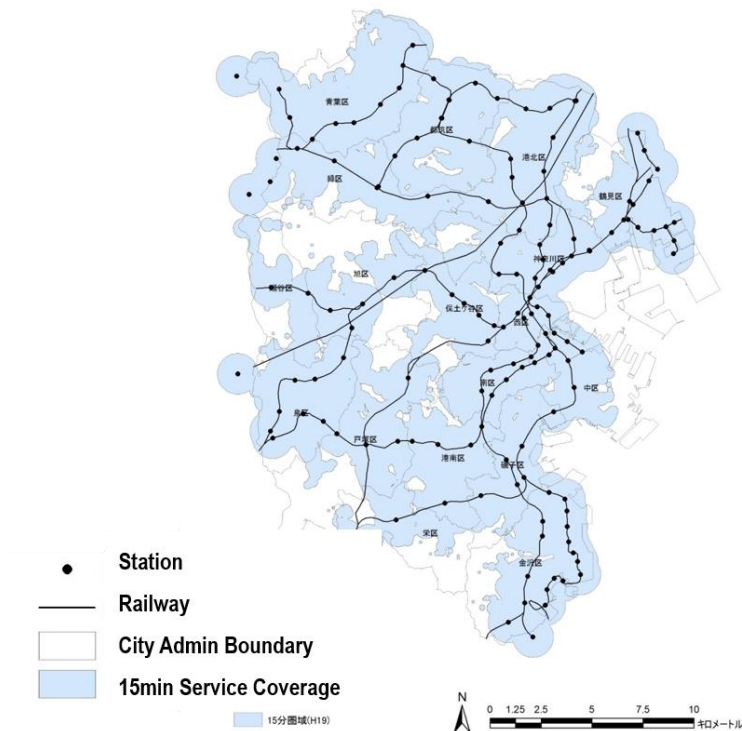


Source: Nikken Sekkei

Figure 65 New Town along Railway Network with TOD in Tama Garden City

Source: Yokohama City

Figure 66 shows transportation system with a range of 15 minutes to the nearest station (year 2008). 90% of the area in Yokohama city can be accessed to the nearest station in 15 minutes (by walking, bicycle, bus, and combination of bus and bicycle or walking). To expand the area from which one can access to the station within certain time can be one of the KPIs to promote public transportation or secure people's transportation.



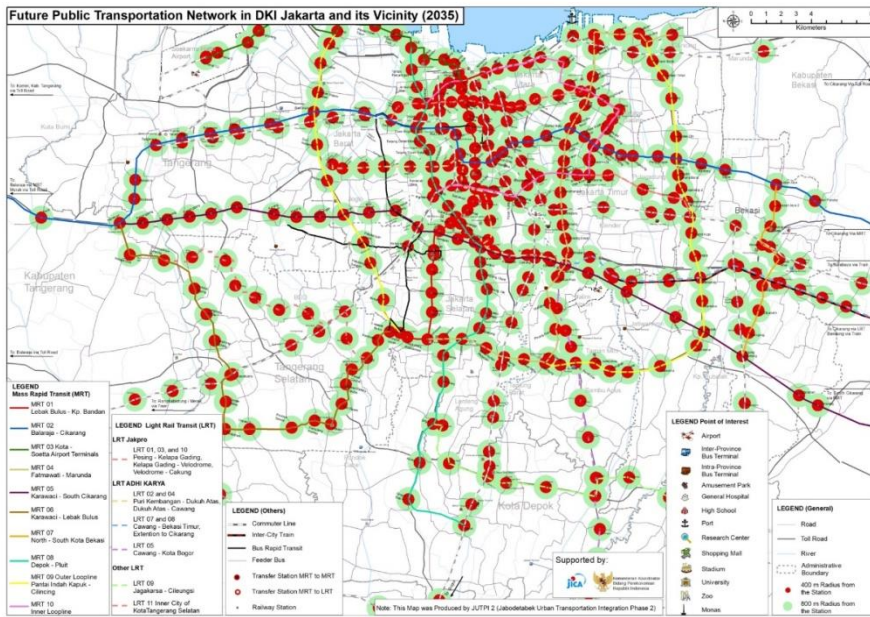
Source: Yokohama City

Figure 66 Yokohama City Service Coverage by Time

5.2.2 Necessity of TOD in JABODETABEK

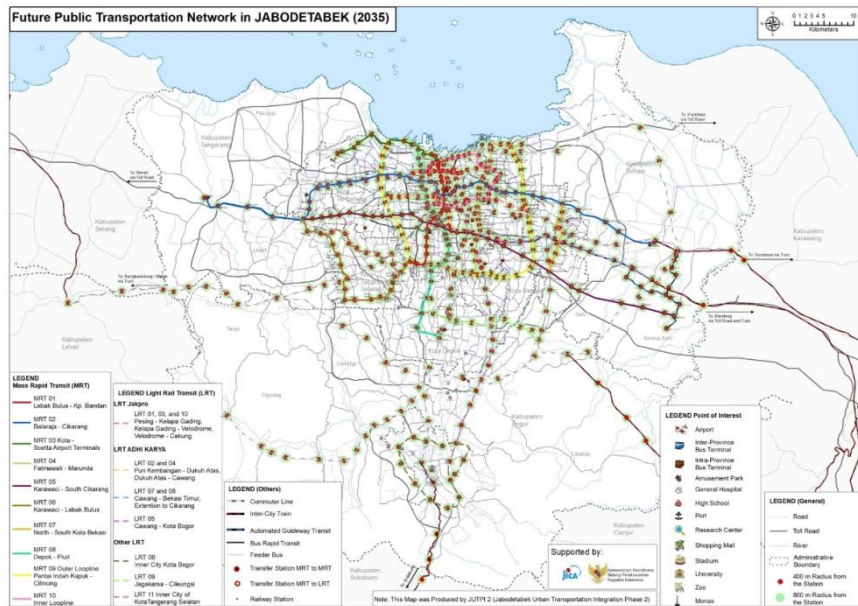
Figure 67 and Figure 68 are the maps of an 800 m radius walkable areas from each station of JABODETABEK and DKI Jakarta based on the JUTPI 2 master plan. In addition, the area outside of the 800 m radius is to be served by feeder transit. If the proposed urban railway network is fully developed, most of the urban center within a 10km radius including the MRT 01 Phase1 section will be covered by walking distance from stations. Furthermore, suburban area development along north-south and east-west railways are to be promoted to contribute to realizing a public transport based urban structure.

As shown in Table 12, there are many proposed TOD project locations. After selecting priority TOD areas (e.g. smooth transfer, promotion of CBD, new town development), priority projects such as intermodal transfer facility development and accumulation of commercial and business functions will be promoted in a short-term. In a long-term, expansion of walkable areas and restructure of urban structure will be realized in line with urban railway network.



Source: JUTPI 2

Figure 67 Example of Walkable Distance Area in DKI Jakarta & Its Vicinity based on JUTPI 2 Network Plan



Source: JUTPI 2

Figure 68 Example of Walkable Distance Area in JABODETABEK based on JUTPI 2 Network Plan

5.3 Review of TOD Related Laws and Regulations

In order to find necessary legislation, regulations, and guideline related to TOD, a review of upper laws, regulations and plans consist of development policies, spatial-related laws and plans, transport-related laws and plans, and land-related laws and plans were undertaken.

Development related law consists of various regulations from Law, Regulation, and Plan. First and foremost, there is the Law Number 25 Year 2004 regarding national development planning system which then derived to national, regional, and local mid-term plan. Spatial planning Law number 26 Year 2007 is fundamental to determine spatial structure and spatial pattern hierarchically from national, provincial, and city/regency. Spatial plan of each city and regency has been reviewed and showed initial measure and direction to develop area that is transit-based. Transportation related laws cover three main aspects, namely road (Law Number Year 38 Year 2004), traffic (Law Number 22 Year 2009), and railway (Law Number 23 Year 2007). As for transportation plan, it can be inferred that the transport plans in several cities and regencies have not included TOD concept, but they are closer to the traffic management and transport infrastructure network plans.

5.3.1 TOD Related Laws and Regulation

TOD related laws covering some regulations issued by Minister of ATR/BPN, Head of BPTJ, and Governor of Jakarta. Regulation of the Ministry of Agrarian and Spatial Planning regarding TOD was stipulated due to the necessity for solving the transport and environmental problem. The objective is to provide the same understanding in the development of transit-oriented area for all stakeholders. Moreover, it is a guideline which gives a clear definition, position and concept of TOD area development in Indonesia. In general, this regulation consists of four main substances, i.e.: principal of TOD, selection and determination of TOD area location, TOD area development, and TOD area agency (institution).

Regulation of Head of BPTJ emphasized the technical aspect in terms of integration between spatial planning and transportation which correspond to five principles of transportation in TOD, namely connectivity, public transport, walk, cycle, and modal shift. Contents of each element regarding transportation are described in detail with

several technical terms that order the minimum standard to be fulfilled.

Regulation of the Governor of DKI Jakarta (*Pergub*) number 67 Year 2019 regarding implementation of transit-oriented development consists of TOD typology, technical requirements, and development of proposed TOD area. In this regulation, TOD is defined as an area development around the transit point which is oriented to the ease of people's movement and transfer, accessibility improvement and area's connectivity, mixture of activity, utilization of dense land towards city revitalization and mass public transport enhancement.

TOD area is an integrated area of mass rapid transit which encourages pedestrians, cyclists, use of mass transit and restriction of motorized transport in the radius of 350 m until 700 m from the center of area with the transit-oriented principles. One of the merits of this regulation is about detail on the requirements: study elements, TOD elements, and institutional aspect. As a local guideline, there are some details that should be met in proposing TOD area, namely study of area, socioeconomic, public transport and accessibility, environment, and other necessary technical studies). Besides, some technical requirements for TOD elements were also described such as: pedestrian facility, bicycle facility, and connection facility.

5.3.2 Regulations Related to TOD implementation

Some regulations related to TOD have been reviewed regarding land consolidation, public facilities, finance, incentive and disincentive, public consultation, and public private partnership.

(1) Land Consolidation

Regulation related with land consolidation has been issued as a Minister of ATR/BPN Regulations No. 12 Year 2019 with the aim of supporting the implementation of agrarian reform and for the realization of control, ownership, use of land that can improve social welfare and quality of life in a fair and equitable manner, the realization of a living environment good and healthy and to support the availability of land for various needs of development activities in accordance with the regional spatial plan based on the principle of sustainable development.

(2) Public Facilities

1. **Road;** as the backbone of the transportation system as stipulated by Law Number 38 Year 2004 and Government Regulation Number 34 Year 2006 regarding Road. Public roads are grouped into road network systems, road functions, road status, and road classes. The road network system is divided into primary, secondary, and tertiary networks. In each system, the road's function is differing into the arterial, collector, local, and environmental function.
2. **Public housing;** the public housing was regulated by Law Number 1 Year 2011 regarding Housing and Settlements and Law Number 20 Year 2011 regarding flats. The implementation of public housing aims to ensure the realization of affordable, liveable, healthy, safe, harmonious, and sustainable environment, also to create integrated settlements to build economic, social, and cultural resilience. In addition, the implementation of public housing will increase efficiency and effectivity of land utilization in urban area.
3. **Green Open Space;** provisions of the green open space was regulated in Minister Regulation Number 05/PRT/M/2008 regarding guideline of provision and utilization of green open space in urban area. The provision of green space based on the area in urban areas consists of public green open space and private open green space with proportion is at least 30% which consists of 20% public green open space and 10% of private green open space. If the area of green space both public and private in the city in question already has a total area greater than the applicable laws or regulations, then the proportion must be maintained.
4. **Non-Green Open Space;** non-green open space was regulated in the Minister of Public Works Regulation no. 12/PRT/M/2009 regarding Guidelines for the provision and utilization of non-green open space in urban areas / urban areas. The main function of the RTNH is the sociocultural function which can play some roles a place for people to socialize, expressing local culture, communication media for city residents, sports and recreation areas, and space and object of education, research, and training in nature.

(3) Finance

Finance related law emphasized on the national and regional structure & budget, subsidy, and tax. National Budget (APBN) consists of an income budget, an expenditure budget, and financing which are issued annually by law. Sources of financing in the state budget can come from tax revenue, non-tax revenue, and grant income. Meanwhile, allocation for the expenditure went to the central government, transfer fund to local government, and village fund. Most allocation goes to central government expenditure which is distributed to each ministry and institution. In terms of sector, most of the budget goes to general service and economy (including infrastructure).

Local government revenue consists of original local revenue, transfer fund, local's debt, and other revenues. Origin Local Revenue (Abbv. PAD) is sourced from local tax, local retribution, local enterprise, and others. The transferred fund is sourced from the Central Government that consists of sharing fund (Dana Bagi Hasil/DBH), general allocation fund (DAU), and specific allocation fund (DAK). Lastly, local revenue comes from other sources that are eligible.

In terms of subsidy, the national government allocated the budget to subsidize six programs, namely fuel, electricity, fertilizer, credit program, tax, and PSO. In this case, there is only a 7% subsidy allocation on the credit programs. The government provides subsidies to developers of subsidizing housing on infrastructure, facilities, and utilizes in the form access road, integrated wastewater management, clean water system with cost value 6.2 million rupiah per housing unit. As for the tax, land and building tax is subject to the highest rate of 0.3% or 0.5% from the taxable sales value or NJKP (the value is 20% for houses price under 1 billion rupiah and 40% for houses above 1 billion rupiah) times tax object sales value or NJOP as a tax base.

(4) Incentive and Disincentive

Incentive and disincentive are two of some instruments of control of the spatial utilization as mentioned in the Spatial Planning Law Number 26 Year 2007 Article 35; that control of spatial use is carried out through zoning arrangement, licensing, incentive, and disincentive regulations, and imposition of sanctions. Incentive is defined as an arrangement, tools or efforts to provide compensation or give a booster for the activities that are in line with the spatial plan. Incentive can be implied in the form of:

- a. Tax relief, granting compensation, cross subsidies, compensation, rent of space, and shares;
- b. Development and procurement of infrastructure;
- c. Convenience of permission procedures; and/or
- d. Giving awards to the public, private sector and/or regional government.

The disincentive is defined as arrangement or devices to prevent, limit growth, or reduce activities that are not in line with spatial plans. The disincentive is enacted to the activities which take place in areas where developments are limited. This instrument can be given in the form of:

- a. Imposition of a high tax which is adjusted to the amount of costs needed to overcome the impacts caused by using the space; and/or
- b. Limitation of infrastructure provisions;
- c. Imposition of compensation, and penalties.

There are three instruments of incentive and disincentive to support TOD area development, namely: incentive zone or bonus zone, transfer development right, and special fiscal zone (disincentive). Semanggi Interchange is a given example for the implementation of floor area ratio (FAR) compensation. It was a private enterprise that is subjected to this FAR compensation rule. The private developer (PT. Mitra Panca Persada) is planned to increase FAR from 7 to 13 or adding the building area into 4.8 Ha amounted for 580 billion. Therefore, contribution to construct interchange around the Semanggi area is required in order to reduce the traffic from and towards the Semanggi area.

(5) Public Consultation

Public consultations in terms of the public hearing, information dissemination, socialization, campaign, etc. are generally and briefly explained in some regulations. The role of the community in development is carried out at the planning step, development step, utilization step, and controlling step, as regulated in each law or regulation related to development implementation. The role of community can be done by individuals, groups including customary law communities, corporations, and non-governmental organization. Role of community is necessary to guarantee rights and obligations of the community, it

is done to realize the development implementation transparency, effective, accountable, improve quality of planning, and realize development in accordance with what has been determined.

(6) Public Private Partnership (PPP)

Regulation about PPP has been legalized by Presidential Regulation no. 38/2015 concerning Cooperation between Government and Business Entity in the Provision of Infrastructure. Government collaboration with business entities (PPP) is one of the schemes that can be chosen in the provision of public infrastructure in Indonesia. The management capabilities and efficiency offered by business entities are expected to assist the government to improve public services through infrastructure provision. PPP is defined as a collaboration between the government and business entities in the provision of infrastructure for the public interest by referring to specifications that have been previously determined by the Minister / head of the Institution / Regional Head / State-owned enterprise / Region-owned enterprise, which partly or wholly uses the resources of the business entity by taking into account the distribution of risk between the parties.

5.4 Review of TOD Workshops

TOD workshops of JUTPI 2 have been conducted four times from December 2017 to April 2019. Each workshop presented different theme based on the output of each step. In total, there were 239 participants from central government, local government, and transport operators attended the workshops.

It is significant that government officers understand concept and necessity of TOD, elaborate development orientation of station area based on TOD potential, and guide and regulate private sector's projects in line with TOD concepts of each station area. For this, in the TOD workshops of JUTPI 2, workshops were held to understand overall planning steps including discussion of issues, development orientation, TOD conceptual, and project implementation.

5.4.1 The 1st TOD Workshop

The 1st TOD workshop was held on December 7, 2017 in Grand Mercure Hotel Jakarta.

The workshop was attended by 40 participants from 19 institutions, namely CMEA, BAPPENAS, BPTJ, Ministry of Transportation, Ministry of ATR/BPN, *Bappeda* Kota Bogor, Kabupaten Bekasi, Kota Bekasi, Kota Tangerang, Kota Tangerang Selatan, Kota Depok, *Dishub* Kota Bogor, Kota Bekasi, Kota Depok, Kabupaten Bekasi, Kota Tangerang Selatan, DKI Jakarta, PT. MRT Jakarta, and Environment and City Arrangement Bureau/*Biro Penataan Kota dan Lingkungan Hidup* (PKLH).



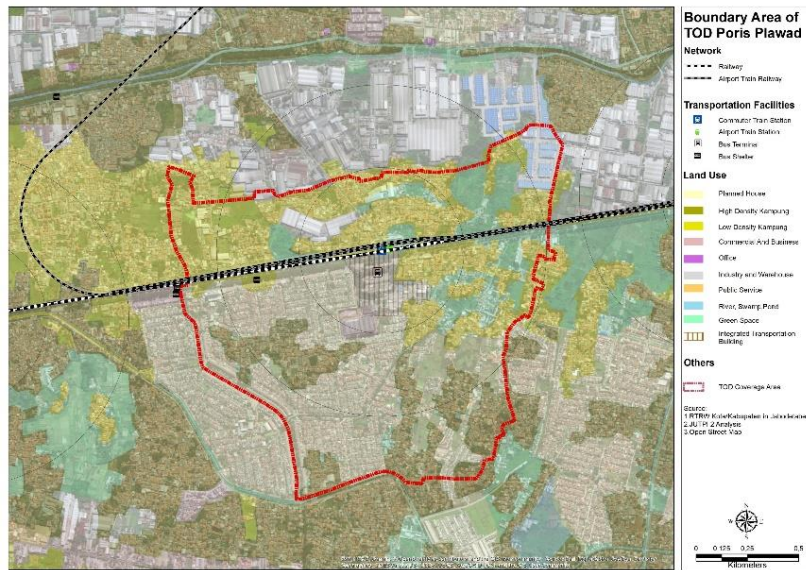
Source: JUTPI 2

Figure 69 Activities during 1st TOD Workshop

The objectives of 1st TOD workshop is aimed at exposing the output of step 1 with the main theme of TOD Model Projects and Determination of TOD Project Coverage Area. There were three presenters delivering the material, Mr. Junkichi Kano and Mr. Takeshi Mita from JUTPI 2 also Mr. Dwi Hariawan from the Ministry of ATR/BPN.

The 1st TOD workshop has been resulted to confirming the boundaries of TOD coverage area (covering of walking distance, approximately 800 m radius from station) as follows:

- a. Physically clear boundary (roads, rivers, railway, etc.);
- b. City, village and district boundaries (administrative boundary); and
- c. Land use boundary such as commercial area, industrial area, residential area and green spaces.



Source: JUTPI 2

Figure 70 Coverage Area of TOD Poris Plawad

The 1st TOD workshop closed with group discussion session to set up coverage area of TOD in Poris Plawad, Kota Tangerang.

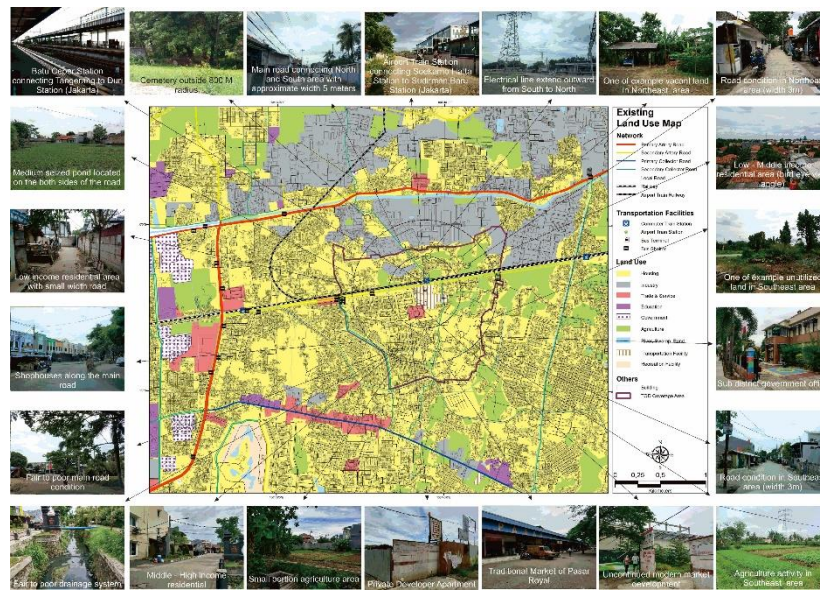
5.4.2 The 2nd TOD Workshop

The 2nd TOD Workshop was held on August 2, 2018 in Pullman Hotel Jakarta. The workshop was attended by 55 participants from 20 institutions, namely: CMEA, BAPPENAS, Ministry of Transportation, BPTJ, *Dinas PUPR* Kota Tangerang, DKI Jakarta, *Dinas Perhubungan* of Kota Bekasi, Kota Tangerang, Kota Bogor, Kota Bekasi, Kota Tangerang Selatan, Kota Depok, and Kabupaten Bogor, *Bappeda* of Kota Depok, Kota Tangerang, Kabupaten Bogor, Kota Bekasi, Kota Bogor, Kota Tangerang Selatan, and Kota Bekasi.



Source: JUTPI 2

Figure 71 Activities during 2nd TOD Workshop



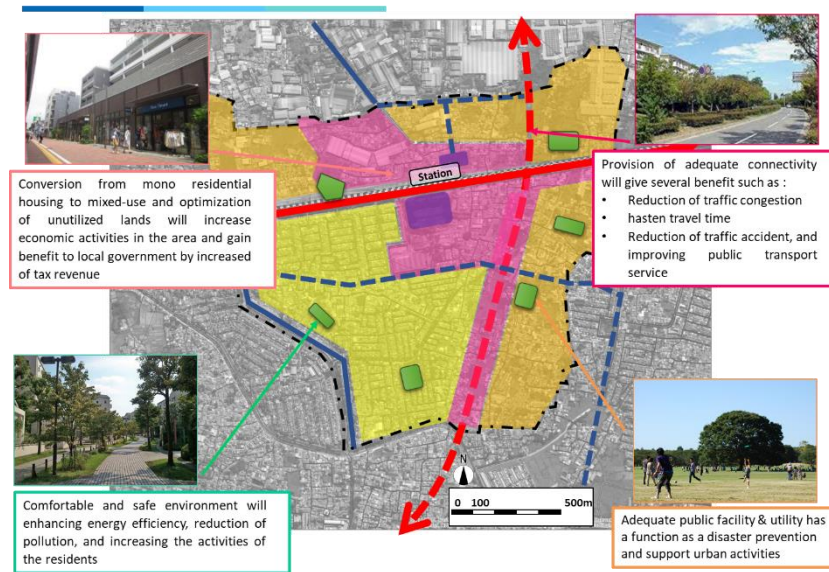
Source: JUTPI 2

Figure 72 Analysis of Situation and Condition in Poris Plawad

Main theme for the 2nd TOD workshop is Regional Setting and Concept Plan and Orientation. There were two presentations delivered by Mr. Junkichi Kano and Ms. Tomoko Abe from JUTPI 2. On the group discussion session, participants were given the exercise to make a concept of functional zoning proposed for Poris Plawad area.

5.4.3 The 3rd TOD Workshop

The 3rd TOD workshop was on January 24, 2019 in Pullman Hotel Jakarta. The workshop was attended by 71 participants attended the workshop from 24 institutions, namely: CMEA, BPTJ, BAPPENAS, Ministry of ATR/BPN, Ministry of Transportation, *Bappeda* of Kota Tangerang Selatan, Kota Tangerang, Kabupaten Bogor, Kota Bekasi, Kota Depok, Kota Bogor, Kabupaten Bekasi, Building and Spatial Plan Agency/*Dinas Bangunan dan Penataan Ruang* (DBPR) Kota Tangerang Selatan, *Dishub* Kabupaten Tangerang, DKI Jakarta, Kabupaten Bogor, Kota Tangerang, Kota Tangerang Selatan, Kota Bekasi, Land Agency of Kota Tangerang and Banten Province, PT. MRT Jakarta, and PUPR Kota Tangerang.



Source: JUTPI 2

Figure 73 TOD Model Project Area Concept Plan



Source: JUTPI 2

Figure 74 Activities during 3rd TOD Workshop

Main theme for 3rd TOD workshop is “TOD Implementation Planning and Station Plaza Development.” In this workshop, there were three presenters from JUTPI 2 explaining about TOD Poris Plawad concept plan (Ms. Tomoko Abe), station plaza development (Mr. Takeshi Mita), and introduction to TOD implementation plan (Mr. Minoru Matsui). As for the group discussion session, the exercise was conducted by planning station plaza planning and Identifying project unit and implementation.

5.4.4 The 4th TOD Workshop

The 4th TOD workshop was held on April 11, 2019 in Pullman Hotel Jakarta as the last of the TOD workshop series. The workshop was attended by 73 participants from 22 institutions, namely: CMEA, BPTJ, Ministry of ATR/BPN, Ministry of Transportation, Dishub DKI Jakarta, Kota Tangerang Selatan, Kabupaten Tangerang, Kabupaten Bogor, Kabupaten Bekasi, Kota Tangerang, Bappeda Kabupaten Bogor, Kota Bogor, Kota Tangerang Selatan, Kabupaten Tangerang, DKI Jakarta, Kota Bekasi, City Arrangement and Environment Agency/*Dinas Penataan Kota dan Lingkungan Hidup* (PKLH) DKI Jakarta, Building and Spatial Plan Agency/*Dinas Bangunan dan Penataan Ruang* (DBPR) Kota Tangerang Selatan, PT. KAI, PT. MRT Jakarta, and Land Agency/*Badan Pertanahan Nasional* (BPN) Kota Tangerang.



Source: JUTPI 2

Figure 75 Activities during 4th TOD Workshop

Main theme for 4th TOD workshop is “TOD Area Development Scenario and Simulation of Land Readjustment.” There were three presenters from JUTPI 2 explaining four presentations: Ms. Tomoko Abe (station development planning and benefit of TOD), Mr. Junkichi Kano (TOD project implementation process using vertical land consolidation), and Mr. Minoru Matsui (TOD implementation plan). As for the group discussion session, the exercise was conducted by doing the simulation of stakeholder coordination.



Source: JUTPI 2

Figure 76 Implementation Plan of the Detailed Study Area

5.5 Issues and Recommendation

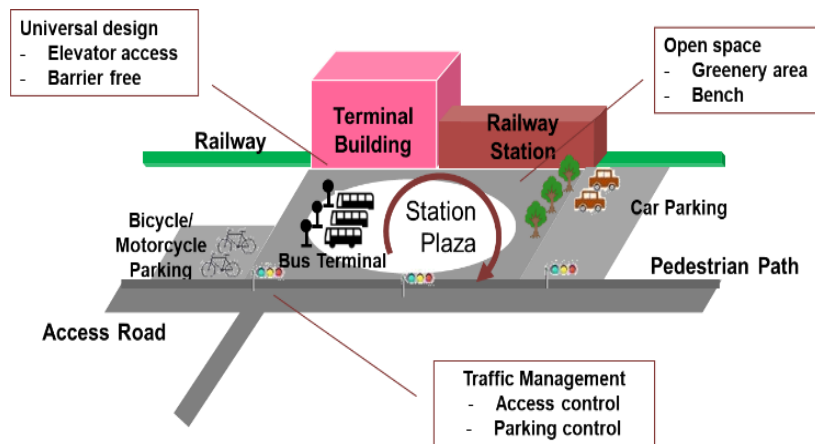
Issues that need to be overcome and recommendations to encourage the implementation of Transit Oriented Development in JABODETABEK are as follows:

(1) Intermodal Transfer Facility Development

Intermodal transfer facility (ITF) development is indispensable for smooth transfer and transport mode integration. There are various kinds of ITF; among others are traffic square, pedestrian deck, and station plaza. Station plaza is an important urban infrastructure that connects the station and the area since traffic and commercial functions in the city accumulate around the station.

Looking at public transportation infrastructure in Japan, some substances that become the main considerations are:

- a. Ensuring the Right of Way (ROW) as a boundary for public land in urban plan;
- b. Planning standard of road and park;
- c. Barrier-free station access (technical criteria for station facility, sidewalk, and public facility);
and
- d. Contribution by private developers.



Source: JUTPI 2

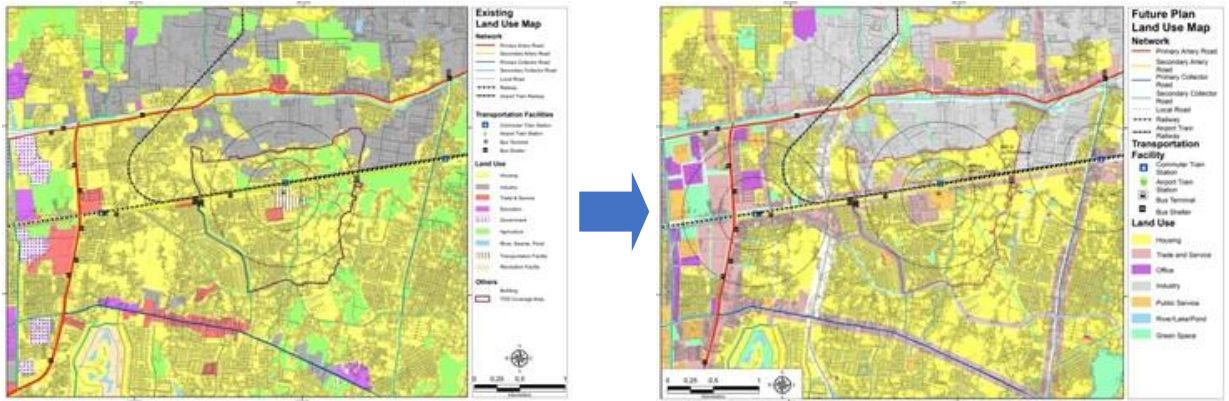
Figure 77 Illustration of Station Plaza

(2) Traffic Impact Assessment

Traffic impact assessment follows parking development, conducting the area study (including traffic demand forecast) and taking necessary measures in collaboration with local governments. The measures assessed will be one of the criteria for development approval with incentive (e.g. FAR bonus) by the government.

(3) Reflection of TOD Master Plan into the Spatial Plan for Appropriate Urban Development Management

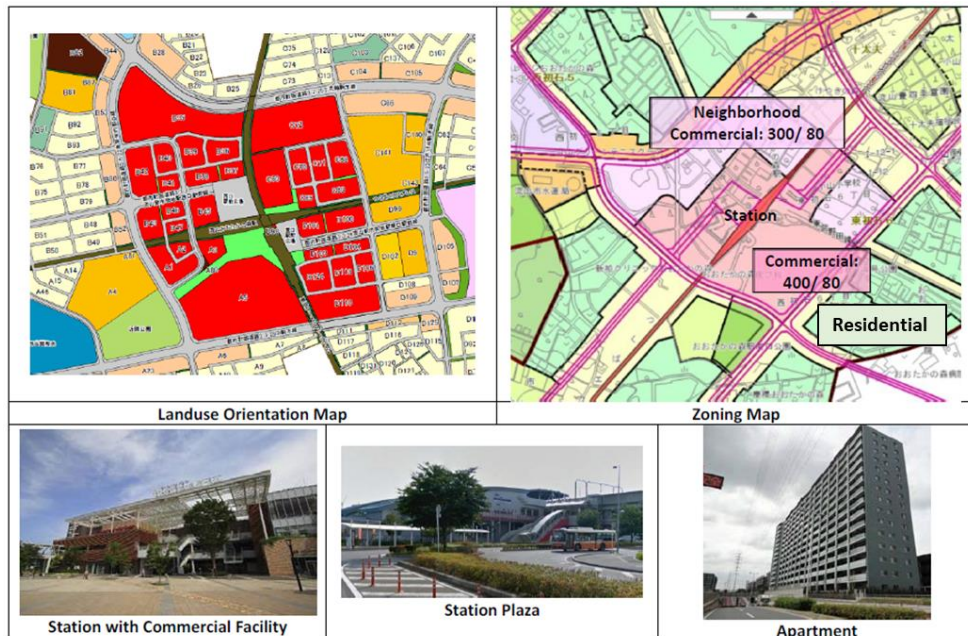
The present zoning system is not detail and not reflected future development potential as well as present condition to guide urban development. In other words, spatial plan should be a tool to control and guide urban development as well as to promote TOD concept. Therefore, zoning and FAR stated in spatial plan should be in line with TOD concept (mixed use, mid & high-rise, etc.).



Source: JUTPI 2

Figure 78 Comparison of Existing and Future Land Use Plan in Poris Plawad Area

Implementation of the spatial plan zoning will enable government to control the land use and maintain the area's urban function, while for the private sector; this arrangement will ease them in determining the planning direction and development. Plan layout space becomes a guide and instrument control for the development of urban areas. With Thus, the concept of TOD and urban planning must go hand in hand. Through masterplan, TOD concept should also be reflected into spatial plan to ensure mixed land use development with transportation facilities.



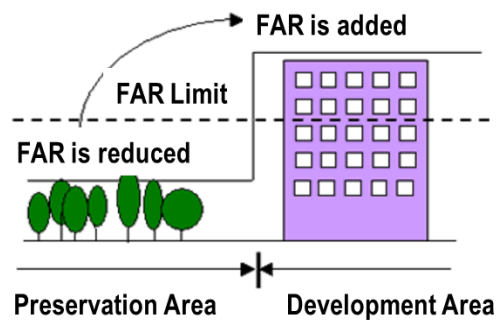
Source: JUTPI 2

Figure 79 Urban Plan of Station Area in Otaka-No Mori Station

(4) Guidance for Public Infrastructure Development

It is considered that FAR in some proposed TOD areas (particularly Poris Plawad) has been set above the average, but in reality, the FAR is still low with limited development. Various incentives or regulation has been set in the guidelines were issued by the Ministry of ATR/BPN, BPTJ, and the Provincial Government of DKI Jakarta but the role of the private sector to contribute to the development of infrastructure of the public is also important.

FAR bonus should be given with proper public infrastructure by transferring FAR in the preservation area to the development area and setting up target FAR with proper road and infrastructure development.



Source: JUTPI 2

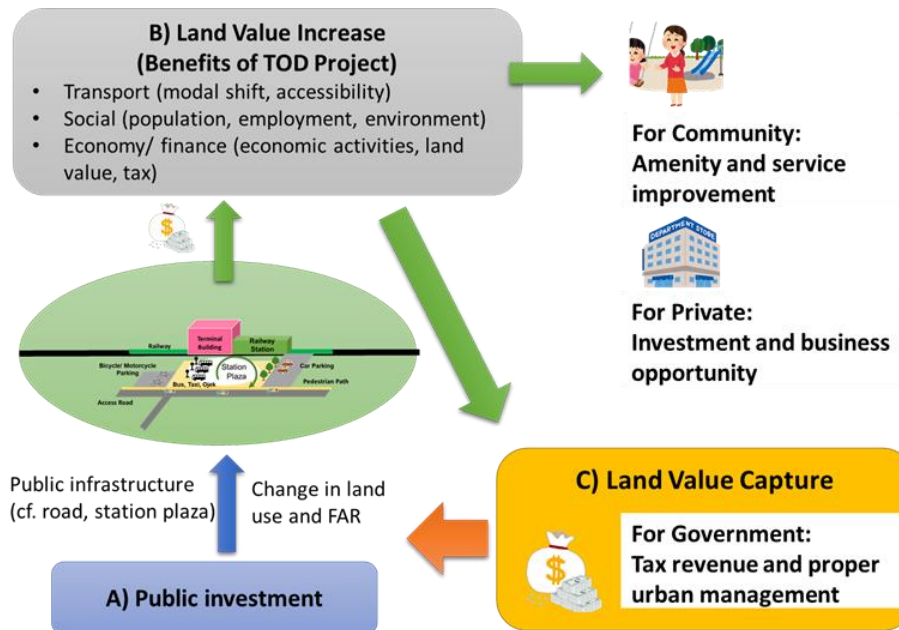
Figure 80 Adjustment of FAR by Area

Incentives and public contributions are necessary to attract private investment in terms of deregulation, financial support, and tax incentive. For instance, in Osaka, there are tall buildings that provide open space as a contribution to the public. If the local government determines rules, private will follow, then all parties can enjoy the results of development.

(5) Land Value Capture (LVC)

LVC is one of the main concepts which are applied for TOD. For TOD implementation, public sector invests public infrastructure (road, station plaza, etc.) and provide appropriate institutional arrangement such as amendment of zoning and FAR. Thanks to TOD project implementation, land values will be increased through the improvement of transport, social, economic, and financial aspects. Local communities enjoy amenity and service improvement and the private sector maximizes opportunities for investment and business.

In terms of public sector, local governments capture values of from increased tax values of land by TOD projects (commercial development, housing development, etc.), and they return increased tax revenue for public investment and proper urban management in a sustainable manner.



Source: JUTPI 2

Figure 81 Land Value Capture (LVC)

(6) Organization, Finance, and Institution

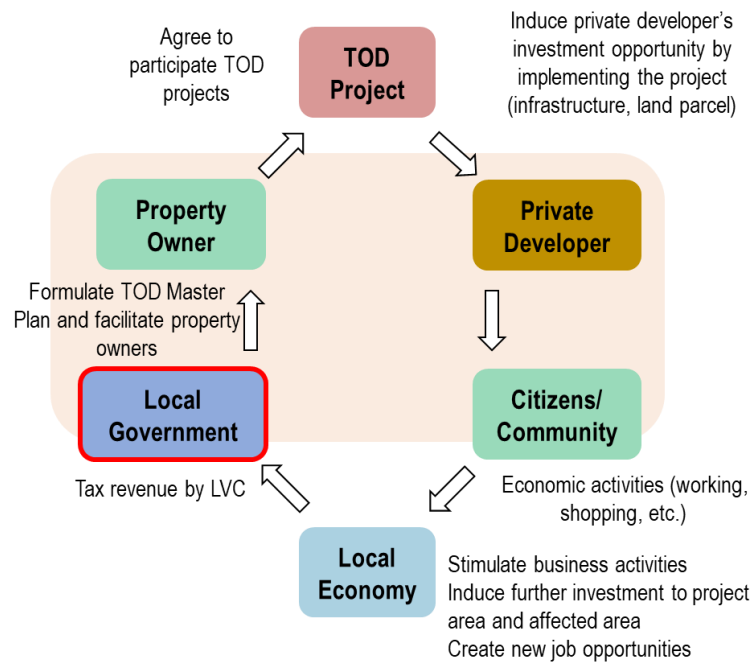
In order to implement TOD projects, a dedicated organization should be planned to accelerate the process and arrange the functions and task of related agencies. Three strategic measures to be proposed are:

- Authorization of project implementation body for long-term (based on examination of project implementation plan and financial capacity);
- Establishment of TOD task force (coordination among government organizations); and
- Nomination of master developer/coordinator (PJPK) for long-term project management.

Regarding financial arrangement, some actions are necessary to support and ensure the sustainability of the project:

- Financial support to local governments to maintain important public facilities;
- Financial support to protect residents' life who do not have registered land by government

- from the aspect of public welfare (to developer or to residents); and
- c. Project-based budget management system to control budgets of each department to implement TOD projects by phasing and priorities (disregarding of annual fiscal budgets).



Source: JUTPI 2

Figure 82 Sharing Roles in TOD Project Implementation

(7) Applicability of Recommendation in line with Issues in Indonesia

Recommendations above were proposed based on experiences in Japan and discussed during TOD workshops. It is expected that these recommendations will meet with issues and needs in Indonesia such as traffic congestion, lack of public infrastructure, necessity of public contribution by private sector. To apply them, improvement of laws and regulations and capacity development of organization are further required.

Table 14 Applicability of Recommendations in line with Issues in Indonesia

Recommendations	Issues in Indonesia	Applicability
(1) Intermodal transfer facility development	Traffic jam is often occurred due to feeder transport at the roadside around the station, where loading and unloading spaces are limited.	Common understanding and needs of station plaza were shared in the TOD workshops. To realize it, ITF development in line with railway projects (including land preparation), traffic management and infrastructure improvement for barrier free should be implemented by BPTJ and local governments.
(2) Traffic impact assessment	Traffic assessment for large-scale commercial development is limited only to survey and check, but not to implement necessary infrastructure development by the private sector. These developments cause traffic congestion and lack of parking space.	In the case of development project permission, traffic impact assessment should be conducted to oblige the private sector to implement necessary measures such as traffic infrastructure development, with an incentive from the government such as the FAR bonus.
(3) Reflection of TOD Master Plan into the Spatial Plan	The present zoning system is not detailed and not reflected future development potential as well as present condition to guide urban development.	The necessity of spatial plan improvement for TOD promotion was shared in the TOD workshops. To apply this, review and updates of each spatial plan of local governments in compliance with future railway network are required.
(4) Guidance for Public Infrastructure Development	Private involvement for public infrastructure development is required due to a limited public budget.	As for incentives shown in present TOD guidelines, actual measures to solve issues of the station area, such as transfer and sales of FAR, FAR bonus with the public contribution, can be applied.
(5) Land Value Capture (LVC)	Private investment will be expected thanks to railway development. These benefits should be shared not only by the private sector but also the public sector and citizens.	JUTPI 2 only shared the basic understanding of LVC, as a mechanism that benefits from the development will be revolved as increased tax revenue and utilized for public investment in a sustainable manner. Measures for LVC in Indonesia should be further studied and discussed.
(6) Organization, Finance and Institution	Each agency has its own tasks and interests for TOD promotion; ATR/BPN for the spatial plan, BPTJ for transport infrastructure planning and development, and DKI Jakarta for urban management. On the contrary, the coordination mechanism among these agencies and a specific organization for TOD did not exist.	For TOD promotion, policy coordination and institutional arrangement by central governments, capacity development for urban management and finance by local governments are required. For this, application and revision of TOD guidelines, role sharing among stakeholders in line with TOD project implementation should be promoted.

Source: JUTPI 2

5.6 Next Steps

It is obvious that JABODETABEK, is facing serious urban problems due to unprecedented growth in private vehicles. In order to improve circumstance, various transport mode should be well integrated, so that people in JABODETABEK can shift their transportation mode from private vehicles to public transportation. To solve this serious urban problem, Not only developing sufficient and integrated public transportation network based on proper future traffic demand forecast, but also from the urban development sideaspect. Hence, TOD is the comprehensive solution which can change the urban structure and promote public transportation usage. As JUTPI 2 suggested several recommendations, there are still a lot of issues to be solved to promote TOD. Especially, “to promote public transportation connectivity improvement” and “to develop legal framework for TOD in JABODETABEK” are very important. Therefore, a further study is highly expected to enhance capacity of urban transportation and urban development related agencies to promote “public transportation connectivity” and to realize urban system based on Public transportation “TOD” in JABODETABEK.

Proposed activities to promote capacity development for TOD implementation are as follows:

1. Promotion of public transport connectivity improvement: To improve transfer condition to other railways and transport modes at existing stations with high transfer demand, intermodal transfer facility development (station plaza, loading and unloading space, etc.) is promoted. In case of new railway lines, necessary lands are ensured at the under viaduct space of an elevated railway, construction yards, and public-owned lands. Then intermodal transfer facilities will be developed in line with railway development.
2. Capacity development for legal framework: Existing TOD guidelines will be elaborated to apply to actual TOD projects. TOD taskforce will be established by ATR/BPN, BPTJ, DKI Jakarta, CMEA, etc. to discuss issues of laws and regulations, and to conduct workshops for capacity development. Furthermore, issues and proposals of private sectors and local government will be reflected into discussion of legal framework.
3. Promotion of mobility improvement: To improve mobility around the station, comprehensive activities will be implemented such as feeder service improvement (bus,

para-transit), traffic management, barrier free measures, signboard planning, mobility management as a promotion activity of public transfer utilization, and traffic safety education. In particular, at the station areas where public facilities (hospital, admin office, etc.) and education facilities are clustered, these activities will be implemented by upgrading capacity of local governments and promoting public participation. For this, bottom-up based sustainable activities to promote station area development will be enhanced.

Chapter 6 Capacity Building

6.1 Capacity Building in Indonesia

6.1.1 Regular Counterpart Meetings

The counterpart meetings were held once every month. Technical transfer was conducted, and discussions were held among the participants. The expert was proactively involved in this activity. The counterpart meeting was planned, coordinated, organized, and lectured by the JUTPI 2 team. It also promoted communication among counterparts. The list of counterpart meetings title and its contents is shown below.

Table 15 Periodic Counterpart Meetings

Date	Title	Contents
2018/1/18	1 st JUTPI 2 C/P Meeting	JUTPI 2 introduction and the progress of Activity 1.
2018/2/25	2 nd JUTPI 2 C/P Meeting	Economic aspect.
2018/3/4	3 rd JUTPI 2 C/P Meeting	Introduction to transport network modelling work.
2018/4/25	4 th JUTPI 2 C/P Meeting	Pilot project implementation.
2018/5/23	5 th JUTPI 2 C/P Meeting	Knowledge sharing and lessons learned from 5 th country-focused training in Japan.
2018/6/6	6 th JUTPI 2 C/P Meeting	Transportation survey in Activity 1.
2018/7/4	7 th JUTPI 2 C/P Meeting	Development priority and land use plan in the JABODETABEK area.
2018/8/15	8 th JUTPI 2 C/P Meeting	TOD workshop recapitulation and transportation survey update.
2018/9/15	10 th JUTPI 2 C/P Meeting	<ol style="list-style-type: none"> 1. Socioeconomic framework. 2. Discussion on RTRW & RITJ vision & mission. 3. Comparison of RTRW & RITJ in GIS.

Date	Title	Contents
2018/10/10	11 th JUTPI 2 C/P Meeting	Transportation survey and demand modelling.
2018/11/14	12 th JUTPI 2 C/P Meeting	Knowledge sharing and lessons learned from 6 th country-focused training in Japan.
2018/12/19	13 rd JUTPI 2 C/P Meeting	<ol style="list-style-type: none"> 1. Past plans and studies to JABODETABEK transport planning. 2. Wish list of existing transport plans for JABODETABEK. 3. Progress of TOD model project. 4. RITJ action plan: the arrangement.
2019/1/30	14 th JUTPI 2 C/P Meeting	<ol style="list-style-type: none"> 1. Lesson learned from the survey. 2. Traffic comparison: JUTPI 1 commuter survey vs JUTPI 2 ADS-MEILI. 3. Traffic comparison: before and after odd-even policy extension. 4. RITJ action plan: the arrangement. 5. Comparison between RITJ and RTRW map.
2019/2/27	15 th JUTPI 2 C/P Meeting	<ol style="list-style-type: none"> 1. Transport survey updates. <ol style="list-style-type: none"> a. Truck OD interview survey. b. Cordon line survey. c. Travel speed survey. d. Traffic comparison: before and after the odd-even policy extension. e. Daily Activity Pattern (DAP) analysis. 2. Traffic safety.
2019/3/20	16 th JUTPI 2 C/P Meeting	<ol style="list-style-type: none"> 1. Present and future trial network assignment. 2. DAP analysis (preliminary result). 3. Pilot project (progress of implementation). 4. Revision of RTRW. 5. Traffic safety updates.
2019/4/24	18 th JUTPI 2 C/P Meeting	<ol style="list-style-type: none"> 1. Heuristic railway planning in Tokyo. 2. Changing mode share in JABODETABEK (Part I). 3. Draft of preliminary future mass transit network and demand forecast. 4. Discussion: transportation policies to achieve KPI in RITJ. 5. Traffic safety: intersection at JABODETABEK.

Date	Title	Contents
2019/5/23	19 th JUTPI 2 C/P Meeting	<ol style="list-style-type: none"> 1. JABODETABEK: lifestyle change. 2. Changing mode share in JABODETABEK (Part II). 3. Population distribution using development potential with GIS technique & MS excel for transport demand forecast model. 4. Approaches to reach 60% of public transport mode share. 5. Traffic safety: findings and recommendation for intersection safety improvement in JABODETABEK.
2019/6/27	20 th JUTPI 2 C/P Meeting	<ol style="list-style-type: none"> 1. Activity 1: detailing RITJ (Presidential Decree No. 55 Year 2018). <ol style="list-style-type: none"> a. Transport surveys. b. ADS result: change of mode share, income distribution and daily activity pattern. c. Travel demand model. d. Travel demand forecast 1: present 2018 and future 2035 (RITJ case). e. Travel demand forecast 2: future 2035 (detailed RITJ-JUTPI 2) and intermediate years. 2. Activity 2: pilot project completion reports and suggestive inputs (Part 1). 3. Activity 3: TOD model project: review of TOD workshops and recommendation for TOD issues.
2019/7/25	21 st JUTPI 2 C/P Meeting	<ol style="list-style-type: none"> 1. Activity 1 <ol style="list-style-type: none"> a. ADS result: income distribution, changing mode share (Part 4). b. Logic for introducing ABM to JABODETABEK and its validation. c. Review on project implementation since JUTPI 2010 and proper implementation scheme. 2. Activity 2: pilot project completion results and suggestive inputs (Part 2). 3. Activity 3: TOD model project: review of TOD workshops and recommendations for TOD issues.
2019/8/14	22 nd JUTPI 2 C/P Meeting	<ol style="list-style-type: none"> 1. Activity 1 <ol style="list-style-type: none"> a. ADS result: comparison of different ADS method. b. Institution for urban transportation. 2. Activity 2: pilot project completion results and suggestive inputs (Part 2). 3. Activity 3: TOD model project review of TOD workshops and recommendation for TOD issues.

Date	Title	Contents
2019/9/25	23 rd JUTPI 2 C/P Meeting	<ol style="list-style-type: none"> 1. Economic loss due to the congestion. 2. Mode share finalization. 3. Institution for urban transportation. 4. How to realize transportation master plan.
2019/10/25	24 th JUTPI 2 C/P Meeting	<ol style="list-style-type: none"> 1. Progress of JUTPI 2. 2. JUTPI 2 next plan. 3. Interactive discussion.
2019/10/31	25 th JUTPI 2 C/P Meeting	<ol style="list-style-type: none"> 1. Activity 3 TOD Model Project. 2. Emission Model. 3. Economic and financial analysis. 4. Transportation survey and demand forecast database for handover.

Source: JUTPI 2

6.1.2 Intensive Training on Transportation Planning Software

A series of training sessions on transportation planning software, was held at the JUTPI 2 project office from October 1 to 2, 2019. A total of 40 officers (20 officers on the first day and 20 officers on the second day) attended the training from each counterpart. JUTPI 2 team supported the planning and organization and prepared a part of the materials. A summary of the intensive training courses is shown below.

Table 16 Summary of Intensive Training on Transportation Planning Software

Day 1 (October 1, 2019) - 1st session

Time	Title
09:30 - 10:00	Overview of PTV VISUM
10:00 - 11:00	PTV VISUM practical example (working with network)
11:00 - 12:00	PTV VISUM practical example (working with matrix)
12:00 - 12:30	Assignment

Day 1 (October 1, 2019) - 2nd session

Time	Title
13:30 - 14:00	Overview of PTV VISUM
14:00 - 15:00	PTV VISUM practical example (working with network)
15:00 - 16:00	PTV VISUM practical example (working with matrix)
16:00 - 16:30	Assignment

Day 2 (October 2, 2019)

Time	Title
09:30 - 11:00	Mapping (making desire line, bandwidth, etc)
11:00 - 12:00	Transportation Demand Management (TDM)
12:00 - 12:30	JUTPI 2 model structure

Source: JUTPI 2

6.2 Country-Focused Training in Japan

In addition to the series of training sessions in Indonesia, seven country-focused training sessions were held in Japan. The training courses provided an opportunity to discuss transportation issues in JABODETABEK and promoted relations with the ministries and local governments. The participants also elaborated the necessity of having a transportation authority in the region. Total of seven country-focused in Japan were implemented with a total of 106 participants from related institutions both from central and local government; CMEA, Greater Jakarta Transportation Authority (BPTJ), BAPPENAS, Ministry of Transportation, Ministry of ATR/BPN, Ministry of Public Works and Housing, Ministry of Industry, *Bappeda* and *Dinas Perhubungan* from each *Kota/Kabupaten* and State Owned Enterprise such as KRL Commuter (PT. KCI), PT. MRT Jakarta and PT. Jakpro joined the training.

Since the country-focused training in Japan targeted technical staffs and transportation planners of the region, the contents of the training courses were focused on how to implement the Transit Oriented Development (TOD) project, New Urban Transportation System (NUTS), urban redevelopment and urban transportation master plan.

The experts had assisted administrative procedures in Indonesia, selection of participants, application of the training courses, preparatory meetings for the training courses and so forth. The summaries of each training course in Japan are shown below.

6.2.1 The First Country-Focused Training in Japan

Headed by the project director from the CMEA, Mr. Tulus Hutagalung, a total of 14 training participants visited Japan for the first JUTPI 2 training course in Japan. The main objectives of the training were to enhance institutional arrangement and capacity for improving urban transport-based system with the overall goal of promoting urban development based on public transport system in JABODETABEK.

The first country focused training in Japan was held in Tokyo and cities of Chiba, Katsu-ura and Minami Boso for five days from 1 to 5 June 2015, excluding days for international transportation. The training participants learned and understood the following main themes:

- Michi-no-Eki (roadside station) system, its scheme and examples.
- Subway network development and underground use.
- Oyumi-no land readjustment development around JR Kamatori Station.
- Automated Guideway Transit (AGT) system in Tokyo (Yuri-Kamome) as part of the New Urban Transportation System (NUTS).
- Development of Toll Road Junction/JCT within the limited land area (Ohashi JCT of Shutokou).

The itinerary of the training course is show in the table below.

Table 17 Itinerary of the First JUTPI 2 Training Course in Japan

Date	Locations
May 30, 2015 (Sat.)	Departure from Jakarta
May 31, 2015 (Sun.)	Arrival in Narita Airport
June 1, 2015 (Mon.)	Ministry of Land, Infrastructure, Tourism and Transportation (MLIT), Tokyo
June 2, 2015 (Tue.)	Japan International Cooperation Agency (JICA), Tokyo
June 3, 2015 (Wed.)	Kamatori, Chiba City
June 4, 2015 (Thu.)	Katsu-ura City
June 5, 2015 (Fri.)	Ministry of Land, Infrastructure, Tourism and Transportation (MLIT), JICA Tokyo
June 6, 2015 (Sat.)	Departure from Tokyo, Arrival in Jakarta

Source: JUTPI 2

Table 18 Participants of the First JUTPI 2 Training Course in Japan

Name	Affiliation
Mr. Tulus Hutagalung	Assistant Deputy for Multimode Transportation (Project Director JUTPI 2), CMEA
Mr. Dwinanta Utama	Division Head of Non-Road Transportation System, CMEA
Mr. Kenwie Leonardo	Sub-Division Head of Land Transport System Policy Analyst, CMEA
Mr. Gema Kalih Praba	Junior Staff for Assistant Deputy for Multimode Transportation, CMEA
Mr. Rizky Ardian Hidayat	Junior Staff for Assistant Deputy for Multimode Transportation, CMEA
Mr. Dail Umamil Asri	Head of Sub-Directorate of Land Transport, Ministry of PPN/BAPPENAS
Mr. Yohannes Octavianus	Directorate General of Land Transportation, Ministry of Transportation
Mr. Jumanto	Directorate General of Railway, Ministry of Transportation
Mr. Yudo Muktiarto	Directorate of Highway, Ministry of Public Works and Settlement
Mr. Rikal Andani	Directorate of Highway, Ministry of Public Works and Settlement
Mr. David Fernando Panjaitan	Dinas Perhubungan, DKI Jakarta
Mr. Pasha Krishnanda	Dinas Perhubungan, DKI Jakarta
Mr. Agus Wibowo Basuki	Dinas Perhubungan, Kota Tangerang
Mr. Erwin Mawandy	<i>Bappeda</i> , Kabupaten Tangerang
Mr. Peri Ramdani	<i>Bappeda</i> , Kabupaten Tangerang
Mr. Anton Tofani	Dinas Perhubungan, Kota Depok

Source: JUTPI 2



Source: JUTPI 2

Figure 83 Pictures of the First JUTPI 2 Training in Japan

6.2.2 The Second Country-Focused Training in Japan

A total of 19 training participants visited Japan for the second JUTPI 2 training course in Japan. The main objective of the training was to enhance institutional arrangement and capacity through networking and collaboration among public and private sectors for improving Transit Oriented Development (TOD) with its supporting schemes such as “kukaku-seiri (land readjustment/land consolidation) and underground use.

The second country-focused training in Japan was held mainly in Tokyo and cities of Sapporo, Sendai and Natori for 12 days from 25 August to 4 September 2015, excluding days for international transportation. The training participants were learned and understand the following main themes:

- TOD in Shibuya - concept, legal framework, scope & scheme of the Shibuya TOD project.
- Station building redevelopment.
- Underground use - actual example and scheme for coordinating public and private sectors
- Actual example of the urban redevelopment scheme for coordinating public and private sectors.
- Subway development and TOD surrounding the stations.
- TOD in Sendai - actual examples and schemes for coordinating public and private sectors.
- Urban reconstruction after March 11, 2011 huge tsunami (Yuriage area of Natori City).
- Underground use in Tokyo - legal framework and schemes to support smooth TOD implementation and actual examples.

The itinerary of the training course is show in the table below.

Table 19 Itinerary of the Second JUTPI 2 Training Course in Japan

Date	Locations
August 22, 2015 (Sat.)	Departure from Jakarta
August 23, 2015 (Sun.)	Arrival in Tokyo Haneda Airport
August 24, 2015 (Mon.)	JICA Tokyo International Center
August 25, 2015 (Tue.)	Shibuya Station District
August 26, 2015 (Wed.)	- Kasumigaseki, Tokyo - Departure from Haneda Tokyo to Sapporo
August 27, 2015 (Thu.)	Sapporo City Government
August 28, 2015 (Fri.)	Sapporo City Government
August 29, 2015 (Sat.)	Sapporo City
August 30, 2015 (Sun.)	- Travel from Sapporo to Hakodate by JR Hokuto 6 - Travel from Hakodate to Shin-Aomori by JR Super Hakucho 28 - Travel from Shin-Aomori to Sendai by JR Shinkansen Hayabusa
August 31, 2015 (Mon.)	Sendai City Government
Sept. 1, 2015 (Tue.)	Sendai City
Sept. 2, 2015 (Wed.)	- Natori City Government - Travel from Sendai to Tokyo by JR Shinkansen Hayabusa
Sept. 3, 2015 (Thu.)	Ministry of Land, Infrastructure, Tourism and Transportation (MLIT), Tokyo
Sept. 4, 2015 (Fri.)	JICA Tokyo
Sept. 5, 2015 (Sat.)	Departure from Haneda Tokyo, Arrival in Jakarta

Source: JUTPI 2

Table 20 Participants of the Second JUTPI 2 Training Course in Japan

Name	Affiliation
Mr. Kenwie Leonardo	Sub-Division Head of Land Transport System Policy Analyst, CMEA.
Mr. Gema Kalih Praba	Junior Staff for Assistant Deputy for Multimode Transportation, CMEA
Ms. Pinkan Amelinda	Junior Staff for Assistant Deputy for Multimode Transportation, CMEA
Mr. Ikhwan Hakim	Director of the Directorate of Transportation, Ministry of PPN/BAPPENAS

Name	Affiliation
Mr. Raden Bonnyswara	Directorate of Transportation, Ministry of PPN/BAPPENAS
Ms, Siti Nur Fadillah	Ministry of Transportation
Mr. Aji Radityo	Ministry of ATR/BPN (Agrarian Affairs and Spatial Planning)
Mr. M. Arifin Siregar	Ministry of ATR/BPN (Agrarian Affairs and Spatial Planning)
Mr. Wisnu Surianugraha	<i>Bappeda</i> DKI Jakarta
Ms. Ani Maryam	<i>Bappeda</i> DKI Jakarta
Mr. Trudo Ramajaya	<i>Bappeda</i> Kota Tangerang
Mr. Sukanta Jamsuri	<i>Bappeda</i> Kota Tangerang Selatan
Ms. Musni Ahyani	<i>Bappeda</i> Kota Tangerang Selatan
Mr. Ajat R. Jatnika	<i>Bappeda</i> Kabupaten Bogor
Mr. Endri Setiana Idris	<i>Bappeda</i> Kabupaten Bogor
Mr. Dadang Mulyana	<i>Bappeda</i> Kota Bekasi
Mr. Erwin Soehana	<i>Bappeda</i> Kota Bekasi
Mr. Hikmatullah Oesman	PT. MRT Jakarta
Mr. Heru Nugroho	PT. MRT Jakarta

Source: JUTPI 2



Figure 84 Pictures of the Second JUTPI 2 Training Course in Japan

6.2.3 The Third Country-Focused Training in Japan

A total of 20 training participants visited Japan for the second JUTPI 2 training course in Japan. The main title of the training was to enhance institutional arrangement and

capacity through sustainable urban and regional development, mainly for improving diversifying urban/capital functions, Transit Oriented Development (TOD), urban parking policy, and step by step urban development with transportation improvement.

The third country-focused training in Japan was held in Tokyo and cities of Mihara, Hiroshima, Himeji, Kobe, Osaka, Yamagata and Fukushima for 9 days from 11 to 19 April 2016, excluding days for international transportation. The training participants learned and understood the following main themes:

- Diversifying urban/capital functions with New Urban Transportation System (NUTS) by Hiroshima City.
- Implementing a large-scale TOD project by Himeji City.
- Diversifying urban/capital functions with New Urban Transportation System (NUTS) by Kobe City.
- Implementing a large-scale TOD project by Osaka City.
- Mini-shinkansen system and its integration policy at Yamagata.
- Mini-shinkansen system and its integration policy at Fukushima.
- Urban parking policy and strategies.
- Automated Guideway Transit (AGT) system in Japan.

The itinerary of the training course is show in the table below.

Table 21 Itinerary of the Third JUTPI 2 Training Course in Japan

Date	Locations
April 10, 2016 (Sun.)	- Departure from Jakarta - Arrival in Narita
April 11, 2016 (Mon.)	- JICA Kansai - Leaving from Mihara to Hiroshima
April 12, 2016 (Tue.)	- Hiroshima city government - Leaving from Hiroshima to Himeji by JR Nozomi 136
April 13, 2016 (Wed.)	Himeji City Government
April 14, 2016 (Thu.)	- Leaving from Himeji to Kobe by bus - Kobe city government
April 15, 2016 (Fri.)	Osaka city government
April 16, 2016 (Sat.)	- Leaving from Osaka to Yamagata - Stay at Yamagata
April 17, 2016 (Sun.)	- Leaving from Yamagata to Fukushima - Stay at Fukushima
April 18, 2016 (Mon.)	- Leaving from Fukushima to Tokyo - Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Tokyo
April 19, 2016 (Tue.)	Kojimachi Tokyo
April 20, 2016 (Wed.)	Additional program, site visit Shinagawa Station
April 21, 2016 (Thu.)	Additional program site visit Shin-Sugita Station
April 22, 2016 (Fri.)	Additional program site visit Nippori Station
April 23, 2016 (Sat.)	Departure from Haneda, arrival in Jakarta

Source: JUTPI 2

Table 22 Participants of the Third JUTPI 2 Training Course in Japan

Name	Affiliation
Mr. Tulus Hutagalung	Assistant Deputy for Multimode Transportation (Project Director JUTPI 2), CMEA
Mr. Dwinanta Utama	Division Head of Non-Road Transportation System, CMEA
Mr. Kenwie Leonardo	Sub-Division Head of Land Transport System Policy Analyst, CMEA.
Ms. Pinkan Amelinda	Junior Staff for Assistant Deputy for Multimode Transportation, CMEA
Ms. Deara Puspaninggara	Junior Staff for Assistant Deputy for Multimode Transportation, CMEA
Mr. Ardi Kurniawan	Junior Staff for Assistant Deputy for Multimode Transportation, CMEA
Mr. Dail Umamil Asri	Head of Sub-Directorate of Land Transport, Ministry of PPN/BAPPENAS
Mr. Gilang Bayu Utomo	Subsidy Policy Division, Ministry of Finance
Mr. Catur Dharmawan	Directorate of Maritime, Transportation and Defense Equipment Industry, Ministry of Industry
Mr. Sigit Santosa	Directorate of Land Consolidation, Ministry of Agrarian Affairs and Spatial Plan (ATR/BPN)
Ms. Indira P. Warpani	Directorate of Spatial Utilization, Ministry of Agrarian Affairs and Spatial Plan (ATR/BPN)
Ms. Mayasari	Sub-Directorate of Metropolitan & Cities, Ministry of Public Works and Settlement
Ms. Elly A. Sinaga	Head of Greater Jakarta Transportation Authority (BPTJ), Ministry of Transportation
Mr. Sigit Irfansyah	Research and Development Division, BPTJ, Ministry of Transportation
Mr. Edi Nusalam	Greater Jakarta Transportation Authority (BPTJ), Ministry of Transportation
Mr. Ariyandi Ariyus	Greater Jakarta Transportation Authority (BPTJ), Ministry of Transportation
Mr. Junedi Sembiring	Greater Jakarta Transportation Authority (BPTJ), Ministry of Transportation
Mr. Devri Bawinto	VP Commercial Operation, PT. <i>Kereta Commuter Indonesia</i>
Mr. Soetanto Soehodho	Deputy Governor of DKI Jakarta
Mr. Ario Pramadhi	President Director of PT. Jakpro
Mr. E. Yusup Taufik	Head of Regional Infrastructure, <i>Bappeda Kabupaten Bekasi</i>

Source: JUTPI 2



Source: JUTPI 2

Figure 85 Pictures of the Third JUTPI 2 Training Course in Japan

6.2.4 The Fourth Country-Focused Training in Japan

A total of 18 training participants visited Japan for the fourth JUTPI 2 training course in Japan. The main title of the training was to enhance institutional arrangement and capacity by improving connectivity for public transport facility, Transit Oriented Development (TOD), New Urban Transport System (Linimo) and ticketing system.

The fourth country-focused training in Japan was held in Tokyo and cities of Nagoya, Kitakyushu and Fukuoka for 8 days from 24 April 2017 to 1 May 2017, excluding days for international transportation. The training participants learned and understood the following main themes:

- Underground usage around Nagoya Station.
- TOD around Nagoya Station.
- Kokura station's public transport integration.
- Railway construction and new town development.

The itinerary of the training course is show in Table 23.

Table 23 Itinerary of the Fourth JUTPI 2 Training Course in Japan

Date	Locations
April 22, 2017 (Sat)	Departure from Jakarta
April 23, 2017 (Sun)	Arrival in Tokyo
April 24, 2017 (Mon)	JICA Tokyo
April 25, 2017 (Tue)	- Leaving from Tokyo to Nagoya by Shinkansen Nozomi 21 - Nagoya City
April 26, 2017 (Wed)	- Nagoya City - Leaving from Nagoya to Kokura
April 27, 2017 (Thu)	- Kokura, Kitakyushu City - Leaving from Kokura to Fukuoka
April 28, 2017 (Fri)	- Fukuoka City - Leaving from Fukuoka to Tokyo
April 29, 2017 (Sat)	Tokyo City
April 30, 2017 (Sun)	Tokyo City
May 1, 2017 (Mon)	JICA Tokyo
May 2, 2017 (Tue)	Departure from Tokyo, arrival in Jakarta

Source: JUTPI 2

Table 24 Participants of the Fourth JUTPI 2 Training Course in Japan

Name	Affiliation
Mr. Tulus Hutagalung	Assistant Deputy for Multimode Transportation (Project Director JUTPI 2), CMEA
Mr. Dwinanta Utama	Division Head of Non-Road Transportation System, CMEA
Mr. Kenwie Leonardo	Sub-Division Head of Land Transport System Policy Analyst, CMEA.
Ms. Pinkan Amelinda	Junior Staff for Assistant Deputy for Multimode Transportation, CMEA
Ms. Deara Puspaninggara	Junior Staff for Assistant Deputy for Multimode Transportation, CMEA
Ms. Elly A. Sinaga	Head of Greater Jakarta Transportation Authority (BPTJ), Ministry of Transportation
Mr. Suharto	Directorate of Planning & Development, Greater Jakarta Transportation Authority (BPTJ), Ministry of Transportation
Mr. Handa Lesmana	Sub-Directorate of Integration Infrastructure, Greater Jakarta Transportation Authority (BPTJ), Ministry of Transportation
Mr. Tonny A. Setiono	Sub-Directorate of Program Planning, Greater Jakarta Transportation Authority (BPTJ), Ministry of Transportation
Mr. Yogi Ananto	Technical Staff for Directorate of Transportation, Ministry of PPN/BAPPENAS

Name	Affiliation
Mr. Trananda Pratama	Consolidation Analyst, Directorate of Land Consolidation, Ministry of Agrarian Affairs and Spatial Plan (ATR/BPN)
Ms. Sofia Aviantie	Head of Finance Division, Directorate General of Railway, Ministry of Transportation
Mr. Awang Meindra	Head of Railway Network Development System, Directorate General of Railway, Ministry of Transportation
Mr. Mochammad Abbas	Head of Economic Division, <i>Bappeda</i> DKI Jakarta
Mr. Andriyansyah	Head of <i>Dishub</i> , DKI Jakarta
Mr. Said Endrawiyanto	Head of <i>Bappeda</i> , Kota Tangerang
Ms. Martha Lena	Section Head, <i>Dishub</i> , Kota Tangerang Selatan
Mr. Dodi Setiawan	Head of Infrastructure & Regional Development Division, <i>Bappeda</i> , Kota Depok

Source: JUTPI 2



Source: JUTPI 2

Figure 86 Pictures of Fourth JUTPI 2 Training Course in Japan

6.2.5 The Fifth Country-Focused Training in Japan

A total of 16 training participants visited Japan for the fifth JUTPI 2 training course in Japan. The main title of the training was Transit Oriented Development (TOD), New Urban Transport System (AGT) and transport barrier free.

The fifth country-focused training in Japan was held in Tokyo, and cities of Toyama and Kanazawa for 10 days from 4 to 14 February 2018, excluding days for international transportation. The training participants learned and understood the following main themes:

- Transport barrier-free in Japan; efforts regarding barrier-free, outline of barrier-free

guideline.

- City planning centered on public transportation; efforts of compact city development, measures to promote public transportation and urban development policy.
- Overview of Toyama light rail system.
- Concept on redevelopment of Kanazawa station square and effect of the maintenance of station square.
- Overview of Automated Guideway Transit (AGT) in Japan.
- Overview and introduction of Yurikamome vehicle.
- Development of Nagareyama new town area, development content of Sky Tree and Sky Tree Town.

The itinerary of the training course is show in the table below.

Table 25 Itinerary of the Fifth JUTPI 2 Training Course in Japan

Date	Locations
February 3, 2018 (Sat)	Departure from Jakarta
February 4, 2018 (Sun)	Arrival in Tokyo
February 5, 2018 (Mon)	JICA Tokyo
February 6, 2018 (Tue)	- Leaving from Tokyo to Toyama by Hokuriku Shinkansen Kagayaki 507 - Toyama City
February 7, 2018 (Wed)	- Leaving from Toyama to Kanazawa by Hokuriku Shinkansen Hakutaka 551 - Kanazawa City
February 8, 2018 (Thu)	- Leaving from Kanazawa to Tokyo by Hokuriku Shinkansen Kagayaki 504 - Tokyo
February 9, 2018 (Fri)	- JICA Tokyo - Chiba
Feb. 10, 2018 (Sat)	Tokyo
Feb. 11, 2018 (Sun)	Tokyo
Feb. 13, 2018 (Mon)	Tokyo

Date	Locations
Feb. 13, 2018 (Tue)	JICA Tokyo
Feb. 14, 2018 (Wed)	Departure from Tokyo, arrival in Jakarta

Source: JUTPI 2

Table 26 Participants of the Fifth JUTPI 2 Training Course in Japan

Name	Affiliation
Mr. Tulus Hutagalung	Assistant Deputy for Multimode Transportation (Project Director JUTPI 2), CMEA
Ms. Supartien Komaladewi	Head of Road Transportation System Division, CMEA
Ms. Pinkan Amelinda	Economic analyst for Road Transportation System, CMEA
Mr. Mirza Syah Alam	Technical Staff in Multimodal Transportation Assistant, CMEA
Mr. Sigit Irfansyah	Research and Development Division, BPTJ, Ministry of Transportation
Mr. Harno Trimadi	Head of Sub-Directorate of Infrastructure Integration, BPTJ, Ministry of Transportation
Ms. Verdalita Sury	Staff of Directorate Planning and Development, BPTJ, Ministry of Transportation
Mr. Wayan Deddy Wedha Setyanto	Transportation Expert Staff Directorate of Transportation, Ministry of PPN/BAPPENAS
Mr. Tentrem Prihatin	Head of Cooperation Section in Directorate of Land Consolidation, Ministry of Agrarian Affairs and Spatial Plan (ATR/BPN)
Mr. Mohammad Faisol	Head of Terminal Unit, <i>Dishub</i> DKI Jakarta
Mr. Ismanto	Head of Pulogebang Terminal, <i>Dishub</i> DKI Jakarta
Mr. Yudi Saptono	Head of infrastructure and regional development, <i>Bappeda</i> Kota Bekasi
Mr. Cecep Supriyadi	Head of Traffic and Road Transport Division, <i>Dishub</i> Kabupaten Bekasi
Ms. Rakhmawati Awas Muluk	Head of <i>Dishub</i> , Kota Bogor
Ms. Syarifah Sofiah	Head of <i>Bappeda</i> , Kabupaten Bogor
Ms. Wawan Setiawan	<i>Dishub</i> , Kabupaten Tangerang

Source: JUTPI 2



Source: JUTPI 2

Figure 87 Pictures of Fifth JUTPI 2 Training Course in Japan

6.2.6 The Sixth Country-Focused Training in Japan

A total of 15 training participants visited Japan for the sixth JUTPI 2 training course in Japan. The main objectives/title of the training were Urban Transportation Master Plan and Transit Oriented Development (TOD).

The sixth country-focused training in Japan was held in Tokyo, and cities of Sagami-hara and Fukuoka for 10 days from 20 to 30 October 2018, excluding days for international transportation. The training participants learned and understood the following main themes:

- Urban transportation master plan and economic impact of urban transportation.
- Station improvement project.
- Urban development/TOD in Saitama.
- Pilot project of mobility management.
- Overview of bus facility countermeasure of safety.
- TOD project in Tokyo.
- Transportation master plan and integrated transportation strategy

The itinerary of the training course is show in Table 27.

Table 27 Itinerary of the Sixth JUTPI 2 Training Course in Japan

Date	Locations
October 20, 2018 (Sat)	Departure from Jakarta
October 21, 2018 (Sun)	Arrival in Haneda Tokyo
October 22, 2018 (Mon)	JICA Tokyo
October 23, 2018 (Tue)	Tokyo Metro
October 24, 2018 (Wed)	Sagamihara City
October 25, 2018 (Thu)	- Tokyo - Leaving from Tokyo to Fukuoka by airplane (JL321)
October 26, 2018 (Fri)	Fukuoka City
October 27, 2018 (Sat)	- Leaving from Fukuoka to Tokyo by airplane (JL308) - Tokyo
October 28, 2018 (Sun)	Tokyo
October 29, 2018 (Mon)	JICA Tokyo
October 30, 2018 (Tue)	Departure from Tokyo, arrival in Jakarta

Source: JUTPI 2

Table 28 Participants of the Sixth JUTPI 2 Training Course in Japan

Name	Affiliation
Mr. Tulus Hutagalung	Assistant Deputy for Multimode Transportation (Project Director JUTPI 2), CMEA
Mr. Dwinanta Utama	Head of non-road Transportation System Division, CMEA
Ms. Yuli Sri Wilanti	Head of Program and Governance of Deputy IV Division, CMEA
Ms. Fauzia Suryani Puteri	Sub-Directorate Head of Policy for Developing Economic Strategic Areas, CMEA
Mr. Prih Galih	Head of Section Infrastructure Integration, BPTJ, Ministry of Transportation
Ms. Susanty Handayani	Technical Staff, BPTJ, Ministry of Transportation
Ms. Selenia Palupiningtyas	Technical Staff, BPTJ, Ministry of Transportation
Ms. Nunuj Nurdjanah	Research and Development, Ministry of Transportation
Mr. Ferdinand Ginting	Head of Traffic Management Section, <i>Dishub</i> DKI Jakarta

Name	Affiliation
Mr. Fuad Hasan	Head of Sub-Section for Regional and Transportation Infrastructure, <i>Bappeda</i> Kabupaten Bekasi
Mr. Yayan Yuliana	Head of <i>Dishub</i> Kota Bekasi
Mr. Dadang Wihana Misbah	Head of <i>Dishub</i> Kota Depok
Mr. Irfan Zacky Faizal	Head of Sub-Section for City Facilities and Infrastructure, <i>Bappeda</i> Kota Bogor
Mr. Agus Wibowo	Head of Section Transportation System Development, <i>Dishub</i> Kota Tangerang
Ms. Carolina Darmawati Rhamdini	Head of Physical and Infrastructure Section, <i>Bappeda</i> , Kota Tangerang Selatan

Source: JUTPI 2



Source: JUTPI 2

Figure 88 Pictures of Sixth JUTPI 2 Training Course in Japan

6.2.7 The Seventh Country-Focused Training in Japan

A total of 10 training participants visited Japan for the seventh JUTPI 2 training course in Japan. The main title of the training was urban transport master plan, TOD, New Urban Transport System (AGT).

The seventh country-focused training in Japan was held in Tokyo and Yokohama City for five days from 1 to 5 September 2019, excluding days for international transportation. The training participants learned and understood the following main themes:

- AGT System, project scheme, depot, barrier free design, spatial planning for the depot and park, etc.
- Minato Mirai TOD project.
- Transportation policies of JABODETABEK, progress of JUTPI 2 project and TOD in

Indonesia.

- Efforts to realize urban transport policy in Japan.
- Schemes and policies regarding incentive and public contribution to induce private investment for TOD project.
- Urban transportation master plan.

The itinerary of the training course is show in the table below.

Table 29 Itinerary of the Seventh JUTPI 2 Training Course in Japan

Date	Locations
August 31, 2019 (Sat)	Departure from Jakarta
Sept. 1, 2019 (Sun)	- Arrival in Haneda Tokyo - Leaving from Tokyo to Yokohama by chartered bus
Sept. 2, 2019 (Mon)	JICA Yokohama
Sept. 3, 2019 (Tue)	Yokohama City
Sept. 4, 2019 (Wed)	Ministry of Land, Infrastructure, Transportation and Tourism (MLIT), Tokyo
Sept. 5, 2019 (Thu)	Yokohama City
Sept. 6, 2019 (Fri)	JICA Yokohama
Sept. 7, 2019 (Sat)	Departure from Tokyo, arrival in Jakarta

Source: JUTPI 2

Table 30 Participants of the Seventh JUTPI 2 Training Course in Japan

Name	Affiliation
Mr. Tulus Hutagalung	Assistant Deputy for Multimode Transportation (Project Director JUTPI 2), CMEA
Ms. Supartien Komaladewi	Head of Road Transportation System Division, CMEA
Ms. Yudhitya Maharani Ristian Palupie	Head of Sub-Division for policy analysis of housing and land, CMEA
Mr. Karlo Manik	Director of Traffic, BPTJ, Ministry of Transportation
Mr. Hananto Prakoso	Head of Road Traffic Sub Directorate, BPTJ, Ministry of Transportation

Name	Affiliation
Mr. Dail Umamil Asri	Deputy Director for Land and Road Transport, Ministry of PPN/BAPPENAS
Ms. Amelia Novianti	Head of Sub-Directorate for Guidelines on Spatial Utilization, Ministry of ATR/BPN
Mr. Andi Triwijaya Monang	Staff Section of Utility Network Infrastructure, <i>Dinas Bina Marga</i> DKI Jakarta
Mr. Hindradman Dewantoro	Head of Economic Division, <i>Bappeda</i> DKI Jakarta
Mr. Irfan Zacky Faisal	Head of Sub-Section for City Facilities and Infrastructure, <i>Bappeda</i> Kota Bogor

Source: JUTPI 2



Source: JUTPI 2

Figure 89 Pictures of Seventh JUTPI 2 Training Course in Japan

A summary of JICA training activities in Japan attended by participants coming from related institutions from both local and central government are presented in the following Table.

Table 31 Summary of JICA Training in Japan

Number of	1 st JICA Training	2 nd JICA Training	3 rd JICA Training	4 th JICA Training	5 th JICA Training	6 th JICA Training	7 th JICA Training	TOTAL
Participants	14	19	20	18	15	15	10	111
Institutions	8	10	12	9	10	11	6	*
Training days	8	15	13	9	12	11	7	75
Cities visited	4	5	9	4	4	3	2	31

Source: JUTPI 2

*** Institutions:**

A. Central Government:

1. CMEA
2. BAPPENAS
3. Ministry of Transportation
4. BPTJ (Greater Jakarta Transportation Authority)
5. Ministry of ATR/BPN (Agrarian, Spatial Plan/National Land Agency)
6. Ministry of Finance
7. Ministry of Public Works and Housing

B. Local Government (Deputy Governor of DKI Jakarta, *Dinas Perhubungan, BAPPEDA*)

1. DKI Jakarta
2. Kota Bogor
3. Kabupaten Bogor
4. Kota Depok
5. Kota Tangerang
6. Kota Tangerang Selatan
7. Kabupaten Tangerang
8. Kota Bekasi
9. Kabupaten Bekasi

C. State Owned Enterprise

1. PT. MRT Jakarta
2. PT. *Jakpro*
3. PT. *Kereta Commuter Indonesia*

6.3 Record of Executing Committee (E/C)

The executing committee meeting was held on July 26, 2017. Summaries of the meeting are shown below.

(1) Presentation by Mr. Dwinanta Utama

- Frame and scope of JUTPI 2 project.
- Project's organizational structure.

(2) Presentation by JUTPI 2 Team

- Frame and scope of JUTPI 2 project, organization of the project (member of technical team, JICA experts and local staff members).
- JUTPI 2 activity framework and three main activities, especially Activity 1.
- Pilot project (Activity 2) and TOD model project (Activity 3)
- Counterpart system establishment and cooperation to provide/share data and survey results.



Source: JUTPI 2

Figure 90 Executing Committee Meeting

6.4 Record of Joint Coordinating Committee

(1) The 1st Joint Coordinating Committee Meeting

The first Joint Coordination Committee Meeting was implemented at the beginning of the project. Matters discussed include project preparation such as setting the project organization framework, formation of the technical team including arrangement for the counterpart team.

(2) The 2nd Joint Coordinating Committee Meeting

The second Joint Coordinating Committee Meeting was held on April 19, 2018. Summaries of the meeting are shown below.

1. Progress of the JUTPI 2 Project Output 1: Detailing JABODETABEK Transportation Master Plan
 - Data collection and analysis (socioeconomic, land use, commuter line and BRT)
 - Result of passenger bottleneck survey
 - Preliminary result of travel speed survey
2. Progress of the JUTPI 2 Project Output 2: Pilot Project
 - Progress of pilot project (selection process and selected 7 pilot projects out of 9 submitted proposals)
3. Progress of the JUTPI 2 Project Output 3: TOD Model Project
 - TOD model project approaches (step to conduct TOD model project)
 - Current situation, regional characteristics, analysis of condition and development plans in Poris Plawad area.
4. Other information
 - Lesson learned from JICA training that could be applied in Indonesia.
 - Counterpart meeting as a monthly event is held in JUTPI 2 office which presents different topics. In this event, JUTPI 2 team shared the progress, as an important part of technical cooperation to share information and transfer knowledge.



Source: JUTPI 2

Figure 91 Second Joint Coordinating Committee

(3) The 3rd Joint Coordinating Committee Meeting

The third Joint Coordinating Committee Meeting was held on October 25, 2019. Summaries of the meeting are shown below.

1. Project Completion Report (all activities)

Project completion report and Annual Monitoring and Evaluation Report (AMER) is to be completed at the end of project period (end of October 2019).

2. Future Public Transportation Network Map

JUTPI 2 provides future public transportation network maps to the counterpart institutions and agencies.

3. Pilot Project Facility Handover

Facilities built by the Pilot Project in six *Kota/Kabupaten* and one province have been handed over to CMEA and then to the local governments through the relevant documents.

4. TOD (Transit-Oriented Development) Model Project

As a technical report, the following reports are provided:

- Output 1: report on laws, plans, and regulation.
- Output 2: report on guidance of TOD concept plan and implementation plan of TOD model project.
- Output 3: report on TOD workshop proceedings.

5. Way Forward

Derived (continuous) projects of JUTPI 2 are being discussed. Main scope of the project activity is related to Urban Transportation System and TOD.

- To promote public transportation connectivity improvement.
- To develop legal framework for TOD in JABODETABEK.
- To improve mobility management to promote public transport usage in JABODETABEK.



Source: JUTPI 2

Figure 92 Third Joint Coordinating Committee

6.5 Record of Project Working Unit

(1) The 1st Project Working Unit Meeting

The first project working unit meeting was held on April 11, 2018. The summaries of the meeting are shown below.

- Project Working Unit (PWU) meeting should be held periodically, apparently once every two months. The principle of participating institutions to be invited consists of three main counterparts (CMEA, BAPPENAS, and BPTJ) as a mandatory group, local government (depends on topic/necessity), and institutions or academic expert.
- PWU meeting could be utilized as a medium to collaborate with the participating institutions also to discuss the progress and issues during the project.
- It is confirmed that JCC would be held on April 19th at Graha Sawala Hall, Gedung Ali Wardhana 1st Floor of CMEA office. In this meeting, all Steering Committee (SC) from central and local government is to be invited, in addition to project directors (executing committee), and project working unit (PWU), as well as transport operators, transport association and academicians.
- Issues to be discussed on JCC should be in line with BPTJ's plan, especially regarding to TOD so that JUTPI 2 and BPTJ could collaborate and develop the existing plan and projects.
- Prior to the JCC meeting, the materials should be given to the participant. In relation to JUTPI 2 activities, the study should be synergized with other guidelines and regulations and give some input to the existing regulation materials, which should respond that the essence of this study is the applicability terms, whether the model could be applied in other regions in addition to the necessary input to the regulation and preparation of the guideline.
- Regarding JUTPI 2's opinion about the latest policy on the odd and even plate number which should be responded soon and CMEA would arrange the meeting between JUTPI 2 and BPTJ to discuss this issue prior to the JCC meeting.

(2) The 2nd Project Working Unit Meeting

The second project working unit meeting was held on September 11, 2018. The summaries of the meeting are shown below.

- It is confirmed that the Steering Committee meeting would be held on September 18th at Grand Hyatt Hotel. All Steering Committee (SC) from the central government is invited, as well as counterparts from local government and JICA representatives.
- RITJ has been stipulated and legalized in the form of Presidential Regulation Number 55 Year 2018. Therefore, BPTJ asked CMEA and JUTPI 2 team to support the regulation and elaborate it in the study.
- JUTPI 2 team asked for a confirmation from BPTJ regarding odd-even number policy whether it would be extended or terminated after Asian Para Games. This information is important because odd-even number implementation would impact the survey schedule, especially ADS which has been postponed. BPTJ responded that there was not any confirmation yet regarding the period of odd-even number but there would be two options regarding this policy whether they would terminate or continue with some modifications. Therefore, input from BPTJ is very important and critical for determining the survey schedule.
- Another issue that needs to be emphasized is Activity-Travel Diary Survey (ADS). ADS is to be conducted in two ways, paper-based and smart phone based. For this survey, the support from CMEA, BPTJ, and other agencies to announce and inform the survey on each agencies' website are very essential.
- Activity 2 reported that now they are in the tendering (bidding) process to select the contractor and scheduled to start the construction in January 2019. There was a main issue for the pilot project regarding the use of a national road which needs some attention and coordination. At last, it is emphasized that pilot project in JUTPI 2 is completely for the purpose of capacity building and the essence of lessons learned for future use.
- Activity 3 reported that they are now in the process of detailing the concept plan and had conducted two workshops for the previous two activities to share the work output and knowledge transfer to the local government. The next workshop is to be held in January to expose the detail of the concept plan and the last workshop for the final result.

6.6 Record of Steering Committee (S/C)

(1) The 1st Steering Committee

The first steering committee meeting was held on September 18, 2018. The summaries of the meeting are shown below.

Table 32 Main Points Discussed and the Conclusion (1st Steering Committee Meeting)

No	Issues	Conclusions
1	Project Schedule	New schedule for transport surveys (especially for Activity-Travel Diary Survey/ADS) was approved, and ADS would be started after the end of Asian Para Games (October 13, 2018) and that the subsequent demand forecast modelling would be completed by February 2019 (with delay of about two months).
2	Progress Report (Activity 1)	JUTPI 2 team explained the socioeconomic framework, and the transport surveys and especially ADS as a key transport survey for activity-based modeling. Necessity for urgent cooperation from the counterpart was confirmed for smooth implementation of ADS.
3	Progress Report (Activity 2)	JUTPI 2 team explained the status and future schedule of Activity 2 as well as the basic design and key points of the seven pilot projects. Necessity for coordination with stakeholders, involvement of local government and collaboration during construction was confirmed for smooth implementation of pilot projects.
4	Progress Report (Activity 3)	JUTPI 2 team reported the progress of the TOD Model Project and explaining the summary of the second TOD workshop in August 2018. Necessity for proactive involvement in the TOD workshop and data collection was confirmed.
5	Data provision for JUTPI 2 team from Indonesian government (including local governments in JABODETABEK) and related agencies	It was confirmed that all the counterparts should provide necessary data as soon as possible to make the result of analysis and demand forecast modeling more reliable.
6	Support to get enough respondents for the ADS	It was confirmed that all the counterparts should give assistance in approaching respondents in each target area and announcing the ADS in their website to support the survey implementation. JUTPI 2 team highlighted urgent necessity of SMS blast using “KEMENKOEKON” as a sender ID.

No	Issues	Conclusions
7	Participation in the project activities	<p>Necessity for proactive participation in the project activities was confirmed to achieve the purpose of JUTPI 2 which is institutional capacity building for the counterparts.</p> <p>Especially for Activity 1, JUTPI 2 team proposed to the counterpart that they should work together with JUTPI 2 team on a regular on-the-job basis for survey analysis and demand forecast modeling.</p>

Source: JUTPI 2

(2) The 2nd Steering Committee

The second steering committee was held on June 24, 2019 with the main agenda to discuss progress of each activity in JUTPI 2. Summaries of the meeting are shown below.

Table 33 Main Points Discussed and the Conclusion (2nd Steering Committee Meeting)

No	Issues	Conclusions
1	Project Activity	Highlighted the objective of the study, organization structure, activities, work plan of JUTPI 2 as well as the update of counterpart meeting. As of June, this event has been held 17 times, and there are several institutions with high attendance, namely CMEA and BPTJ from central government, and local government of Kota Bekasi, Kota Tangerang, and Kota Tangerang Selatan.
2	Progress Report (Activity 1)	<p>JUTPI 2 team explained the travel demand model, which consists of Activity-Based Model (ABM), present and future network, also future and intermediate years of RITJ and JUTPI 2.</p> <p>Necessity for urgent cooperation from the counterpart was confirmed for smooth implementation of ADS.</p>
3	Progress Report (Activity 2)	<p>JUTPI 2 team explained the status of Activity 2 as well as the importance of socialization to introduce the facilities to the citizen, especially pelican crossing, to gain people's awareness. As the handover process is being carried out, it is expected that local government prepare the budget for facility maintenance and preparing electricity to be utilized in a timely manner.</p> <p>Explanation on defect inspection period which can be claimed once there are defects on the facility while defects caused by vandalism are not included. Therefore, support from local government is highly expected.</p>

No	Issues	Conclusions
		Implementation of post-survey should be conducted on September 2019.
4	Progress Report (Activity 3)	<p>JUTPI 2 team explained the TOD model project, review of TOD workshops, TOD concept plan and project plan in the detail study area of Poris Plawad, and recommendations for TOD issues.</p> <p>TOD issues in this case of JABODETABEK generally can be used to formulate planning and implementation aspect, i.e. no specific organization and plan to consolidate TOD concept plan, property right conversion plan, and funding source for a long-term project. Some recommendations were formulated to deal with those issues, i.e. formulation of TOD concept plan by local government, the appropriate legal mechanism for conservation of existing property right and incentives for TOD implementation. Regarding the organization, an establishment of TOD task force and project implementation body authorization were proposed.</p>

Source: JUTPI 2

6.7 JUTPI 2 Seminars

(1) Activity 1 Seminar

The seminar was implemented on August 6, 2019 chaired by Mr. Wahyu Utomo as the Deputy Minister for Infrastructure Acceleration and Regional Development of CMEA also attended by The Honorable Mr. Tadayuki Miyashita as the Minister of Japan Embassy for Indonesia and Mr. Shinichi Yamanaka, Chief Representative of JICA Indonesia. This event aimed at disseminating the JABODETABEK Transportation Master Plan to the public, counterpart, and media by publicly presenting the future public transport corridors and suitable format (MRT, LRT, BRT, or so on) that follows for the short-term (2024), mid-term (2029), and long-term (2035).



Source: JUTPI 2

Figure 93 Activity 1 Seminar

In this seminar, JUTPI 2 team explained approaches for detailing the RITJ, activity-travel diary survey, and consideration of urban development. In the beginning, key transport surveys and demand modelling was summarized to get the whole image of data collection with an emphasis on ADS as the main survey and input for modeling.

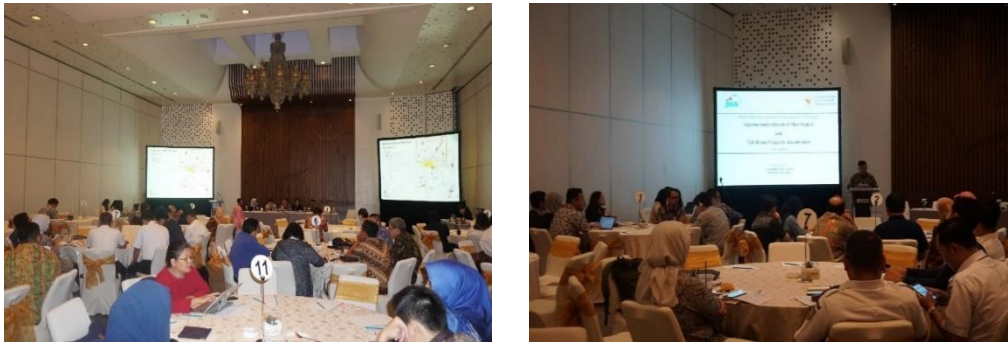
Some transportation surveys were also explained: Travel Speed Survey (TSS), Screen Line, and Activity Travel Diary Survey. Represented by colors, vehicles speed was slow in some roads especially in the evening condition showing the characteristic of traffic and congestion in Jakarta and JABODETABEK. From TSS on toll road, there is a significant growth in the number of traffics. Moreover, the Screen Line Survey showed that the number of motorcycles has increased to 4 times compared to 2002.

(2) Activity 2 and 3 Seminar

The seminar was implemented on August 22, 2019 chaired by Mr. Tulus Hutagalung as the Assistant to the Deputy of Multimodal Transportation System of CMEA also attended by Mr. Tomoyuki Kawabata, Senior Representative of JICA Indonesia. This event aimed at disseminating the implementation result of activity 2 and activity 3 of JUTPI 2 regarding pilot project and TOD model project. Some invited guests included local government officials and representatives of transportation operators in JABODETABEK such as the Jakarta MRT, Adhi Karya LRT, Jakpro LRT, and PT. KAI.

For Activity 2, JUTPI 2 team explained the progress of the pilot project activity. The

process of activities from planning, design and construction as well as technical features was explained briefly. Coordination with all central government, regional governments, the private sector and the community is essential. The central government, especially the BBPJK VI as the authorized party in granting permission to use national roads for the construction of public facilities had a crucial role in the process.



Source: JUTPI 2

Figure 94 Activity 2 & 3 Seminar

For Activity 3, JUTPI 2 team explained the stages (step) implementation TOD project models where at each stage of implementation held a workshop as a means of discussion that has been carried out as many as four times.

Articles about JUTPI 2 seminar's activities were posted by the media, one of them was posted in “republika.co.id”¹. In the article posted on Wednesday, August 7, 2019, titled “JABODETABEK Connected 10 MRT Networks in 2035,” it is mentioned that the rail-based public transportation projects in Jakarta, Bogor, Depok, Tangerang, Bekasi (JABODETABEK) areas would continue to be developed, expanding the scope of integration until 2035. In that article, Mr. Sinichi Yamanaka, Chief Representative of JICA Indonesia conveyed that Indonesia, especially Jakarta, was in dire need of an integrated modern transportation project and the project must be handled in a cross-boundary manner (cross-government institutions and cross-regions).

1

<https://republika.co.id/berita/pwhsgo368/nasional/JABODETABEK-nasional/19/08/06/pythjv330-JABODETABEK-terkoneksi-10-jaringan-mrt-pada-2035>

In the article, Deputy Minister for Infrastructure Acceleration and Regional Development of the CMEA, Mr. Wahyu Utomo added that in accordance with Presidential Regulation (Perpres) No. 55 Year 2018, regarding JABODETABEK Transportation Master Plan (RITJ), all public transport infrastructure must be integrated including TOD (Transit Oriented Development) centers, so that the distribution of people and economic activities can be equalized.

Chapter 7 Conclusion

7.1 Summary of the Project Output

The general project output covers the two times of Steering Committee meetings, one time Executing Committee meeting, three times Joint Coordinating Committee meetings, 23 times Counterpart meetings, and seven times trainings in Japan. Each of the activity within this project also has outputs. The first activity's outputs are; transportation surveys that are essential to update transportation database, travel demand model, and reports of Annual Monitoring and Evaluation that is useful to update and monitor the realization of the master plan. The second activity's outputs are; establishment of pilot projects that enhance the use of public transportation use with international standard of construction method (including safety and quality control) and the further recommendation that includes lesson learned. The third activity's outputs are: four workshops and reports of TOD concept plan and guidance to implement TOD.

7.2 Impact of the Project

JUTPI 2 project evaluation adopts the five DAC (Development Assistant Committee) evaluation criteria from OECD (Organization for Economic Co-operation and Development) as the standard for evaluation/assessment to determine the relevance and fulfillment of objectives, developmental efficiency, effectiveness, impact, and sustainability of efforts of the project.

With the overall goal to promote urban development based on integrated public transportation system in JABODETABEK, and to enhance institutional arrangement and capacity for improvement of urban transport-based system in JABODETABEK, the DAC evaluation criteria consist of the following five items:

1) Relevance

JABODETABEK Urban Transportation Policy Integration (JUTPI) Phase 2 project aims to develop the function of administrative institutions of the urban transport system by promoting capacity development and cooperation among urban transportation related organizations in JABODETABEK to contribute to the urban development in the public transportation system by conducting three main activities as follows:

- (1) Detailing the RITJ;
- (2) Enhancing capacity of urban transportation related agencies to implement transportation projects in JABODETABEK through implementation of pilot projects; and
- (3) Enhancing capacity of urban transportation related agencies to implement TOD Model Projects in JABODETABEK.

The Indonesian side represented by the counterparts and the task teams were collaborating with the Japanese side (long-term and short-term experts) to implement the project. In this case, the activities and outputs of the project are consistent with the overall goal and the attainment of its objectives, and the outputs are also consistent with the intended impact and effects.

The impact of the project has a synergistic nature with the needs and consistency of the Japanese ODA program policies. With the results of JUTPI 2 output, the Government of Indonesia can use it as a model in terms of planning and implementing projects (for example in making TOD guidelines). The Government of Indonesia to make project planning and implementation in this case must still refer to a policy variable that is effective and integrated across the region, and not only implemented at the *Kota/Kabupaten* level, so that in the future, outputs that have been formulated in JUTPI 2 can continue to be reflected in terms of planning and implementing a development program. Through this conformity, the Japanese ODA program can be more easily applied, given that the ODA program cannot be implemented if many of the program plans in the original master plan are stalled and the realization is even for things that were not previously planned.

2) Effectiveness

The implementation of three main activities in JUTPI 2 project had been carried out and implemented effectively. Together with counterpart personnel, JUTPI 2 experts collected various pieces of information on transportation as a material for detailing the RITJ, although it was difficult to collect the information. Several basic analyses on transportation were done by the expert and counterpart personnel utilizing the collected information and survey results.

In the pilot project implementation, relevant agencies in each local government carrying out the pilot project activities were actively involved and played an active role in the successful implementation of pilot project. It is also applied in the implementation of TOD Model Project activity, where the active involvement of the central government, in this case the Ministry of ATR/BPN (Ministry of Spatial and Agrarian Affairs) also played an important role in the successful implementation of the activity.

While full time counterparts from all the relevant agencies were expected at the beginning of the project, full time participation was not possible due to their tasks in their own organizations and for administrative reasons. Thus, periodic study group meetings/counterpart meetings were implemented once a month. Overall, the active participation of relevant institution both in local and central government is a major factor influencing the achievement of the project's objectives.

In general, with the project's overall goal to promote urban development based on public transport system in JABODETABEK, it is expected that the urban transportation policies and project implementation can be realized. Implementation of urban transportation policies and pilot project is the result of effectiveness cross-sectoral and cross-regional coordination amid related stakeholders. Furthermore, meetings and road show activities to/from each *Kota/Kabupaten* have indicated the achievement of outputs from the three main activities.

3) Efficiency

The project was originally scheduled from July 2014 until July 2019. The project term was extended until October 31, 2019 based on the Record of Discussion (R/D) which was agreed on April 18, 2019, with one of the subjects such as: "Duration of the project will be five years and three months until October 2019, with the reason of the inevitable delay of project activities, in particular data collection for key transportation surveys, caused by the implementation of Odd-Even number plate policy that impacts travel behavior substantially."

In the implementation of pilot project, there were also delays caused by the permission process

between local government with the central government for projects implemented on national roads, and technical matters such as land status issues and land clearing process. Those factors certainly changed the expert dispatch plan as well as fiscal plans of operational expenses, local portion and project office costs.

4) Impact

The travel demand model that is developed within the project scope of work enables Indonesian side to further input and evaluate based on their needs. The scenarios that have been provided also have considered different situations in the future that can be the reference to policymakers to increase the use of public transportation mode. With proposals of infrastructure development provided as part of the work of detailing RITJ, annual monitoring and evaluation sheet is also available so that Indonesian side could prioritize the transportation-related projects in future years of realization.

Implemented pilot projects that are in forms of pedestrian path, bus shelter, and wayfinding board have been receiving positive feedback that is beneficial to encourage people to use public transport mode. Such implemented pilot project is expected to be replicated by Indonesian side and, even better, to be refined. The experiences during design, permission, and implementation processes would be beneficial for further projects.

TOD guideline within the project scope of work is expected to be a common guidance to TOD implementation across JABODETABEK. In addition, regulation integration regarding TOD is expected to be soon formulated by utilizing the reports of TOD within the scope of the project.

In this case, the results of JUTPI 2 have generally been in line with the developed urban/metropolitan area development system, as an example by recommending public transport lines that are structurally integrated with the modal hierarchy such as MRT, BRT LRT and bus feeders as well as a well-connected road network. In addition, there are also a number of examples of projects that have been implemented with the aim of mobilizing local governments to continue this kind of activity, especially if the TOD concept is to be applied at the transportation nodes.

5) Sustainability

For output 1, it is expected that in the future years, the travel demand model that is developed within the project scope along with the collected transportation database should enable Indonesian side to further input, utilize and evaluate based on their needs. Priority of each

local government transportation related projects in future years also can be arranged based on the proposals of infrastructure development provided as part of the work of detailing RITJ, and annual monitoring and evaluation sheet.

For output 2, based on the experiences gained by relevant local government institutions during the pilot project implementation at the planning, implementation and evaluation stage, it is expected that pilot projects activity which focused on enhancing capacity of agencies in Local Governments to implement small project to improve public transportation usage should be replicated or refined by each local government for the sustainability of activities.

For output 3, in the case study of TOD model project in JUTPI 2, is expected that the activity should enhance capacity of urban transportation related agencies to implement Transit-Oriented Development (TOD) projects. It is also expected that TOD guideline within the project scope of work should be able to be used as common guidance to the TOD implementation in the future years for relevant institution, which in turn will give a great benefit and impact for urban development in relation with urban mass transportation system.

With a good and proper master plan, and the realization of its controlled program plans based on the planned years that have been set, the metropolitan area will become a center of business and technological activity and become an example of a good organized bureaucratic system.

7.3 Recommendations

7.3.1 Current Issues of Urban Transportation Planning in JABODETABEK

Project purposes are enhancement of governance for implementing the JABODETABEK urban transportation projects and improvement of the capability and technical strength of the target groups on urban transportation planning. Current issues and recommendations on these are summarized in Table 34.

Table 34 JUTPI 2 Operation Issues and Recommendations

Aspects	Issues	Cases	Recommendations
Transportation Survey and Modeling.	Insufficient time of actual survey conduct compared to what is reflected in the Project Design Matrix (PDM).	Supplemental Survey (Activity-Travel Diary Survey using Smartphone) that took unthinkably longer than that was planned: the first time to conduct the Activity-based model.	Possibility to elongate allocated time for the survey (data collection, data cleaning, and analysis). In addition, the longer modeling process should also be considered as the level of detail is profound.
Coordination within local government and stakeholders.	Permit-related issues for pilot project implementation.	Lack of communication and integration plans within the government institution and any other stakeholders create a so called "bypass" system in the implementation of transportation facility. Therefore, in "normal" condition, coordination among stakeholders was not made, instead, the construction remains ongoing. However, this is not the case for JUTPI 2.	The long but necessary process of implementing the pilot project has been experienced by JUTPI 2. This is very good lesson-learned for the local government because they finally understood each step of a way and actually conducted those steps. In the future similar type of JICA project, it is necessary to consider this factor to the expected time of completion or total project duration itself, unless, the "bypass" path could be optional.
Cross-institutional authority	Obscurity of authority between DKI Jakarta and central government transportation related agencies.	Dominant sectoral and regional ego due to the financial capacity and space to solve transportation problems. President Jokowi has a plan to appoint the DKI Jakarta Provincial Government as the coordinator in the integration of Greater Jakarta transportation. In terms of authority issues within DKI Jakarta Government, the role of TGUPP (Governor's Team for Development Acceleration) is also ambiguous, due to the issue of overlapping authority with existing	Central Government needs to immediately clarify the role of the current transportation authority (BPTJ) and decide which institution will be the coordinator or authority that will manage greater Jakarta transportation. Once decided, it is necessary to strengthen the institution because Greater Jakarta transportation needs an intact unity of policies.

Aspects	Issues	Cases	Recommendations
		working units.	
Regulation and perception.	Perception to the certain urban transportation development concept.	In case of the TOD area development, there is no common perception of the concept of TOD area development at the local government level with regulations issued by the central government (Ministry of ATR/BPN, BPTJ) since this topic is rather new.	Further socialization to equalize understanding and perception of the concept of TOD area development by the related central government institutions/agencies, facilitated by BPTJ by using reference of JUTPI 2 result of TOD model project guidance and recommendation.
Human Resource & Institution.	Human resource capacity development.	Inadequate human resource capacity and capability, especially those who involve in urban transportation development planning in the local government level.	Training programs, such as comparative study activities and training for the utilization of software that support urban transportation development planning need to be carried out regularly, facilitated by BPTJ and/or CMEA.
	Readiness of related local government institutions/agencies to manage and maintain JUTPI 2 results	Limitation of budget and human resources to maintain and utilize JUTPI 2 results.	Continuing long-term expert dispatch after the project completion may be necessary, especially during the post-project period for couple of months or a year. So that JUTPI 2 products are utilized and properly monitored.
JICA Training and Counterpart	Personnel rotation	Counterparts and trainees of JICA training were moved to another agency or ministry periodically.	While this is something that is inevitable, the selection process needs to be done in more scrutiny. It may be best to collect commitment prior to the name selection by having close communication to each trainee's supervisor/boss.

Source: JUTPI 2

7.3.2 Actions to Be Taken by the Government

(1) Transparency in Policy Making Process and Procedure

Fundamental materials and information for transportation policy in Indonesia are scarce, and measures for transportation problems are suddenly prepared after the situation becomes critical. Thus, the measures are implemented without detailed consideration, and a number of them are not implemented or are halted. Although a number of coordination meetings are held, the real function of the meetings is not to decide policies among participated agencies but to exchange information. Final decisions are often made by each organization without considering comments from the other organizations. Several transportation policies are, therefore, suddenly diverted by a short-sighted political will. These policies are usually unbalanced in terms of sector and region. The ad-hoc decision making of high-rank officers and politicians destroy the motivation of staff level officers as well. By clarifying the decision-making process and procedures and by increasing transparency, it is expected that staff level and manager level officers should be motivated because they can take necessary measures to promote their policy to decision makers effectively.

(2) Region-wide Administration

In terms of transportation issues of the metropolitan area, demarcation of authority, responsibility and finance are not clear among central government agencies, provincial governments or *Kota/Kabupaten* governments. While the Indonesian government promoted autonomy of *Kota/Kabupaten* governments, urban transportation problems exceed the boundaries of *Kota/Kabupaten* and provinces. Actions, therefore, have to be taken beyond administrative boundaries. On the other hand, financial resources for transportation and other policies were not transferred to *Kota/Kabupaten* governments. While the ministry of home affairs is examining the autonomy of local governments; authority, responsibility, and financial resources are recommended to be a package. Arguments on who has to take the primary role in administration of urban transportation issues, the central government or local governments, also have to be settled.

(3) Human Resources for Transportation Planning

In terms of both quality and quantity, human resources for transportation planning are highly required. For instance, only one officer is in charge of transportation planning in regional planning boards (*Bappeda*) of some *Kota/Kabupaten*. Thus, it was not possible for them to participate in the JUTPI project as full-time counterpart personnel. Regarding the central government, some officers are busy with duties for other regions and other sectors and it was not possible for them to participate in the JUTPI 2 project.

As mentioned above, the ad-hoc decision making has demotivated staff level officers. In addition, the wage and salary administration system encouraging business trips and meetings for information exchange rather than making decisions and bringing implementation of the projects forward. Base salary of public a servant is usually just above the minimum wage of the region. They also receive allowances when they join the meetings, go on business trips, and join a big project. Due to this system, some public servants pursue meetings.

On the other hand, the projects and tasks handled by each person exceed their capacity due to the continuous shortage of transportation planning personnel, especially for high rank officers. While they sometimes outsource tasks to local consultants, the results are sometimes not examined from the viewpoint of public administration.

(4) Financing Scheme

JUTPI 2 pointed out the lack of funding for the transportation sector in Indonesia compared with other countries. Investment in social capital such as transportation infrastructure which meets demand to maintain the economic growth of the nation is essential. Funding resources for this can be created by reducing the fuel subsidy and earmarking of fuel tax to infrastructures as well as involvement of private sectors through Public Private Partnership (PPP) scheme and other funding schemes such as PINA (Non-Government Budget Equity Financing), Local Government Bond, etc. On the other hand, there is a huge amount of unused budget every year due to complex procurement procedures and slow administration. Revision of execution of the budget is expected.

7.3.3 Lessons Learned for Similar Projects

JUTPI 2 is a unique project which aims to revise transportation planning and to support setting up a cross-sector and cross-boundary transportation authority with more than 15 relevant agencies. No other examples can be found in the previous technical cooperation projects by JICA. Lessons learned from this project for implementation of similar projects in the future are summarized below.

(1) Participation of Counterpart Personnel from the Relevant Agencies

It took a great deal of time to communicate with all the relevant agencies and request participation of counterpart personnel as full time or part time staff from each agency. It is recommended for main counterpart agencies to confirm counterpart personnel from the relevant agencies prior to commencement of a project and this should be stipulated in a formal document such as a record of the discussions.

(2) Human Resources of Main Counterpart Agency

Since a number of counterpart personnel from varieties of agencies participated, it required a large volume of communications. It is recommended to find an appropriate counterpart organization which has leadership, staff and motivation. If the expected counterpart agency does not have these attributes, an increase in a number of staff should be requested.

**Coordinating Ministry for Economic Affairs
Republic of Indonesia**

**JABODETABEK Urban Transportation
Policy Integration Project Phase 2
in the Republic of Indonesia**

Annex 01: Project Design Matrix (PDM)

October 2019

Japan International Cooperation Agency (JICA)

ALMEC Corporation

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JR
20-004

ANNEX I PROJECT DESIGN MATRIX

Project Name : JABODETABEK Urban Transportation Policy Integration Phase 2 Target Group : CMEA (1), BAPPENAS (2), MOT – BPTJ (3), Local Government (4)

Target Area : JABODETABEK Project Period : May 2014 –July 2019 (60 months) Date : October 24, 2019
Version : 0

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
<p>Overall Goal: To promote urban development based on public transport system in JABODETABEK</p>	<p>The adoption of urban transportation policies and project implementation in JABODETABEK urban transportation master plan</p>	<p>Urban transportation policies and regulations of the related agencies in JABODETABEK</p> <ul style="list-style-type: none"> • Presidential decrees • Ministerial decrees • Local government regulations • Transportation-related policies • Spatial Plans 	<ul style="list-style-type: none"> • Current urban transportation policies in JABODETABEK are not changed substantially • There is no major bottleneck such as land acquisition.
<p>Project Purpose: To enhance institutional arrangement and capacity for improvement of urban transport-based system in JABODETABEK</p>	<ul style="list-style-type: none"> • Establishment of sustainable framework for cross-sectoral and cross-regional coordination of transportation issues in JABODETABEK • More than half of planned projects and TOD model projects to be implemented 	<ul style="list-style-type: none"> • Presidential decrees • Ministerial decrees • Local government regulations • Transportation-related policies • Spatial Plans • Project Documents 	<p>Current urban transportation policies in JABODETABEK are not changed substantially</p>
<p>Outputs 1. To develop a cross-ministerial and cross-boundary framework to promote integrated urban transportation policies in JABODETABEK</p>	<p>1-1 Detailing the JABODETABEK urban transportation master plan 1-2 Development of Annual Monitoring Report (AMR) of the Urban Transportation Master Plan 1-3 Establishment and maintenance of JABODETABEK urban</p>	<ul style="list-style-type: none"> • Annual Project Reports • Minutes of the Meetings • News Articles 	<p>Current prioritized urban transportation policies in JABODETABEK are not changed substantially</p>

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
	transportation database 1-4 Establishment of sustainable framework to promote urban transportation policies in JABODETABEK		
2. To enhance capacity of urban transportation related agencies to implement transportation projects in JABODETABEK through implementation of pilot projects	2-1 Establishment of implementation mechanism of pilot projects 2-2 The number of the implemented pilot projects 2-3 Evaluation result of pilot projects and recommendation for sustainable implementation in future		
3. To enhance capacity of urban transportation related agencies to implement TOD projects in JABODETABEK	3-1 The number of reviewed policies regarding TOD 3-2 The number of TOD model project(s) 3-3 Evaluation result of TOD model project(s) and recommendation for sustainable in future		

*JABODETABEK Urban Transportation Policy Integration Project Phase 2 in the Republic of Indonesia
Annex 01: Project Design Matrix (PDM)*

Activities	Inputs		Important Assumption
	The Japanese Side	The Indonesian Side	
<p>1-1 To establish the Steering Committee (SC), Executing Committee (EC), Project Working Unit (PWU) and Task Teams</p> <p>1-2 To update JABODETABEK transportation masterplan</p> <p>1-3 To facilitate process of implementation of JABODETABEK urban transportation master plan</p> <p>1-4 To monitor and evaluate progress of the JABODETABEK urban transportation master plan and develop its Annual Monitoring and Evaluation Report (AMER)</p> <p>1-5 To establish and enhance operation/maintenance system for JABODETABEK urban transportation database</p> <p>1-6 To establish and enhance operation/maintenance system for JABODETABEK urban transportation database</p> <p>1-7 To establish and enhance sustainable framework for cross-sectoral and cross-regional coordination of transportation issues in JABODETABEK</p> <p>1-8 To formulate policy development plan for specific issues necessary to achieve the goal of master plan</p>	<p>1. Long-term experts Urban Transportation Policy Advisor</p> <p>2. Short-term experts Short-term expert will be dispatched in accordance with the needs for the effective and smooth implementation of the Project. They are experts of in the fields of: urban transport planning, demand forecast, urban traffic economy, environment impact analysis and evaluation, transit-oriented development (TOD), urban transport evaluation and design, road planning, traffic survey, urban transport database, land use, urban transport policy, public transport planning, and pilot project.</p> <p>3. Training for counterpart Personnel in Japan and/or the third countries.</p> <p>4. Provision of machinery and equipment for implementing the Project (including subprojects)</p> <p>5. Local expenses for the Project activities</p> <ul style="list-style-type: none"> • Running expenses needed for implementing the Project • Research, traveling, or any other 	<p>1. Personnel</p> <ul style="list-style-type: none"> • Project Director • Co-Project Director • Project Manager • Co-Project Manager • Other Counterparts <p>2. Others</p> <ul style="list-style-type: none"> • Administrative and operational costs • Status guarantee for Japanese experts and ID card for access • Allowing access to the necessary data and related information 	<p>Pre-Conditions</p> <p><Issues and countermeasures></p> <hr/> <p>Issues:</p> <p>Delay in data collection and transportation database update.</p> <p>Demarcation and ensure the consistency between TOD model project case study by JUTPI 2 and Polis Playwad bus terminal TOD project by BPTJ and private developer.</p> <p>Countermeasures:</p> <ul style="list-style-type: none"> • Patience in following up • Collective meetings • Comprehensive trial and error for software development • Clear demarcation, close communication and sharing the information each other.

Activities	Inputs		Important Assumption
	The Japanese Side	The Indonesian Side	
<p>2-1 To analyze urban transportation related policies of the related agencies in JABODETABEK</p> <p>2-2 To establish and update the implementation mechanism for pilot projects including a method of selection, implementation support and evaluation considering relevant urban transportation policies of related agencies in JABODETABEK</p> <p>2-3 To implement the pilot projects</p> <p>2-4 To evaluate the result of the pilot projects</p> <p>2-5 To develop recommendation containing lesson learnt from the result of the implementation of pilot projects</p> <p>3-1 To analyze TOD-related policies of related agencies in JABODETABEK</p> <p>3-2 To review existing TOD related laws and regulations of related agencies in JABODETABEK and prepare necessary modification to current law and outlines of new regulations</p> <p>3-3 To identify the demarcation among ministries/organization concerned and support necessary coordination by CMEA for necessary legislation</p> <p>3-4 To prepare and update implementing plan</p>	<p>activities related to Japanese experts</p> <ul style="list-style-type: none"> • Procurement of Local Experts (Indonesia local consultants and/or professors) <p>6. Office space</p>		

*JABODETABEK Urban Transportation Policy Integration Project Phase 2 in the Republic of Indonesia
Annex 01: Project Design Matrix (PDM)*

Activities	Inputs		Important Assumption
	The Japanese Side	The Indonesian Side	
<p>of TOD model project(s) (i.e. survey, financial source, and evaluation)</p> <p>3-5 To strengthen the institutional development capacity to implement the TOD model project(s)</p> <p>3-6 To support (some stage of) implementation of the TOD model project(s)</p> <p>3-7 To evaluate the result of TOD model project(s)</p> <p>3-8 To develop recommendation containing lesson learnt from the result of the implementation of TOD model project(s)</p>			

Note:

- (1) CMEA; Coordinating Ministry of Economic Affairs;
- (2) BAPPENAS; Badan Perencanaan Pembangunan Nasional;
- (3) BPTJ; Badan Pengelola Transportasi Jabodetabek;
- (4) DKI Jakarta Province, West Java Province, Banten Province, Kota Bogor, Kabupaten Bogor, Kota Depok, Kota Tangerang, Kabupaten Tangerang, Kota Bekasi, Kabupaten Bekasi, Kota Tangerang Selatan