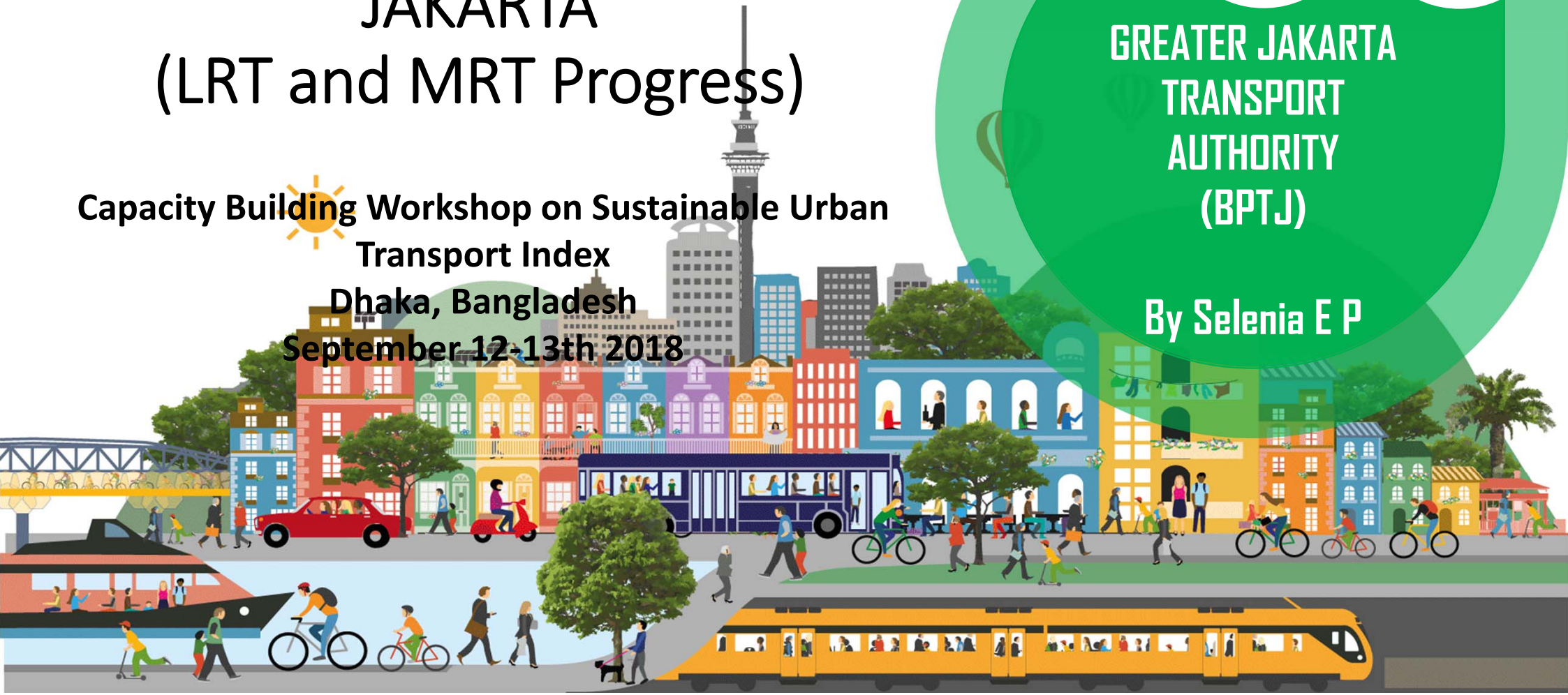
IMPROVEMENT OF URBAN TRANSPORT SYSTEM IN GREATER JAKARTA (LRT and MRT Progress)

Capacity Building Workshop on Sustainable Urban Transport Index
Dhaka, Bangladesh
September 12-13th 2018

GREATER JAKARTA TRANSPORT AUTHORITY (BPTJ)

By Selenia E P

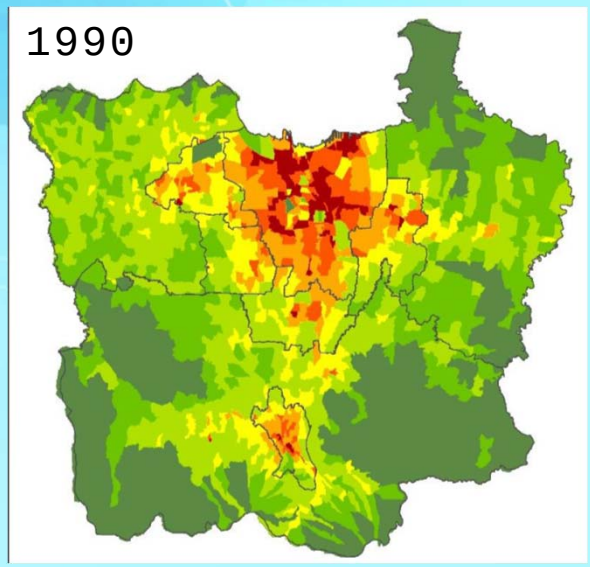


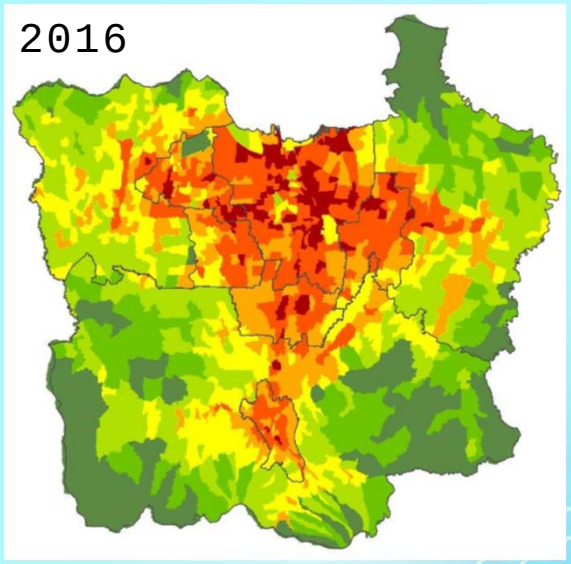
1 EXISTING CONDITION

AN OVERVIEW

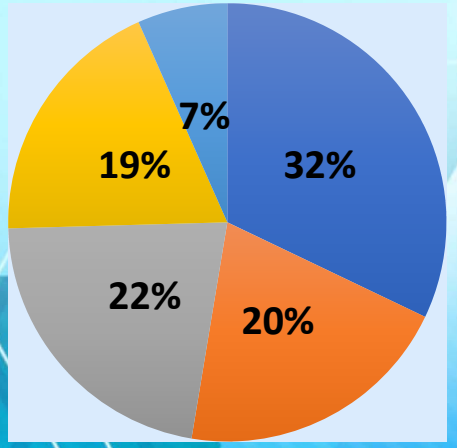
Greater Jakarta Transport Authority

POPULATION AND AREA OF GREATER JAKARTA





CITY	AREA (km^2)
DKI Jakarta	740.30
Greater Jakarta	6,399.40



Population Percentage

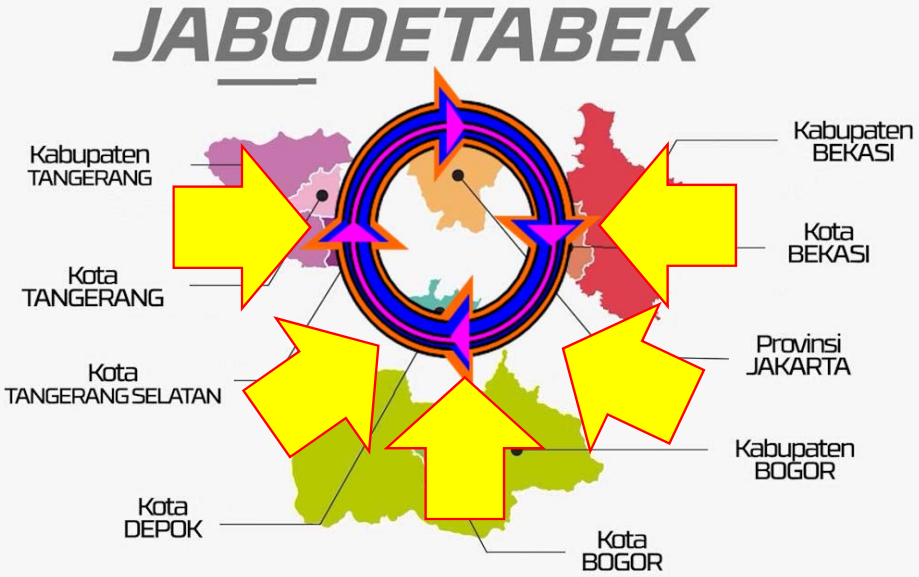
DKI Jakarta Bogor Tangerang Bekasi Depok

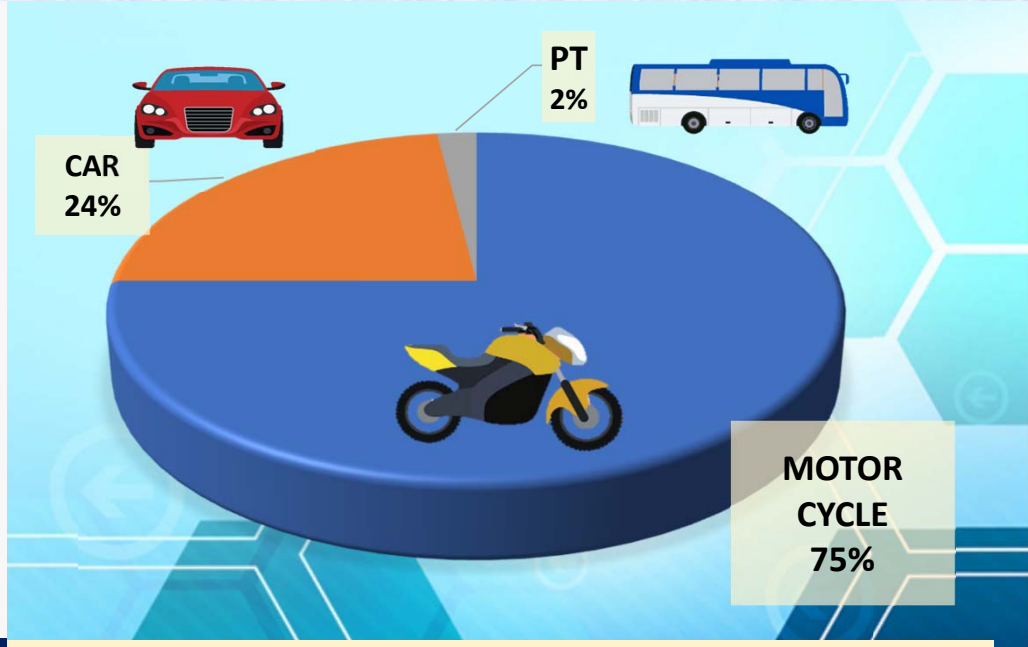
Greater Jakarta consist of 3 provinces and 9 municipalities

Total population of Greater Jakarta is 31,7 million people in 2016

Greater Jakarta Transport Authority

TRAVEL DEMAND IN GREATER JAKARTA





Consist of:

- **Inner Jakarta: 23,42 Million trip/day**
- **Commuter (Outer-Inner): 4,06 Million trip/day**
- **Other (Pass-through and Inner Suburban): 20,02 Million trip/day**

Total Trip in Greater Jakarta

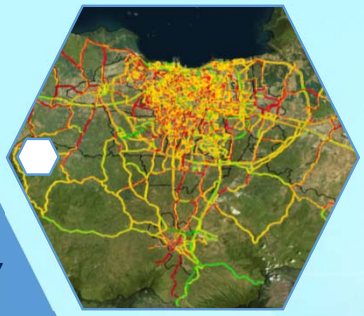
47,5 Million trip/day

Greater Jakarta Transport Authority

MAJOR TRANSPORT PROBLEMS IN GREATER JAKARTA

PROBLEM :

1. Congestion rising, moda share dominated by private vehicle usage and public transport share remain low.
2. Mass Public Transport services contribution considered low due to lack of provision (actual) and limited budget.
3. Economic losses due to traffic congestion up to USD 1,3 billion (2010) and predicted to be USD 6,5 billion in 2020.



VOLUME CAPACITY RATIO (VCR) ALMOST EXCEEDED 1

AVERAGE SPEED AT PEAK HOUR 10KM/HR CAUSED BY TRAFFIC CONGESTION

POOR QUALITY OF PUBLIC TRANSPORT SERVICE

2

SUSTAINABLE URBAN TRANSPORT INDEX

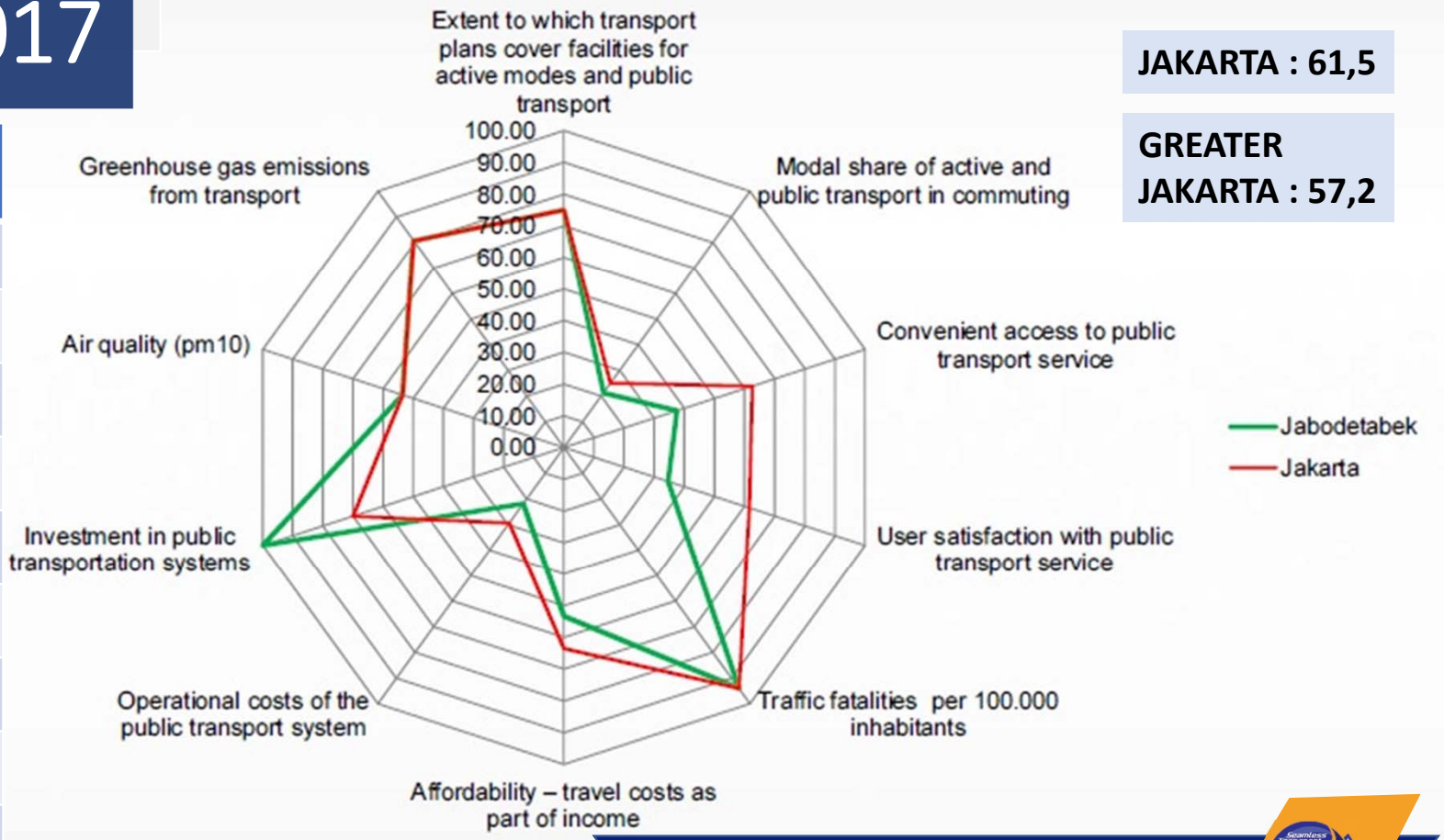
IN GREATER JAKARTA 2017

Greater Jakarta Transport Authority

COMPARING CITIES ALL INDICATORS

SUTI RESULT 2017

INDICATORS	GREATER JAKARTA	JAKARTA
1	**75,00**	**75,00**
2	21,25	25,00
3	37,50	62,50
4	34,62	61,54
5	**94,00**	**94,00**
6	53,33	63,49
7	21,83	29,41
8	**100,00**	**70,00**
9	53,57	53,57
10	**80,73**	**80,73**



JAKARTA : 61,5

GREATER JAKARTA : 57,2

Greater Jakarta Transport Authority

FUTURE PLAN
(Implementation of SUTI for Greater Jakarta)

STRONG

- **Extent to which masterplan covers PUBLIC TRANSPORT**
- **Traffic fatalities**
- **Investment of Public Transport System**
- **Greenhouse emission from transport**

WEAKNESS

- **Modal share of active and Public Transport**
- **Convenient Access to Public Transport Services**
- **User Satisfaction**
- **Operation Cost of Public Transport System**

MODERATE

- Affordability travel cost as part of income
- Air Quality (PM 10)

Greater Jakarta Transport Authority

3

THE WAY FORWARD

Greater Jakarta Transport Authority

GREATER JAKARTA TRANSPORT AUTHORITY ESTABLISHMENT

LEGAL BASIS

Presidential Decree No. 103/ 2015 concerning the establishment of Jabodetabek Transportation Agency (Jakarta, Bogor, Depok, Tenggerang and Bekasi)

ROLE AND FUNCTIONS

Develop, manage and improve integrated transportation services in Jakarta, Bogor, Depok, Tangerang and Bekasi by implementing good organizational governance.

In carrying out the duties of the GJTA, it refers to the RITJ stipulated through a Presidential Decree

Seamless Transport Through Integration

BPTJ

BADAN PENGELOLA TRANSPORTASI JABODETABEK

Greater Jakarta Transport Authority

Key Performance Indicator

1. The use of public transport is 60% of the total movement of people
2. Travel from origin to destination max 1.5 hours during peak hours
3. Average speed of 30 km / h at peak hours
4. The coverage of public transport services in urban areas is 80% of the length of the road
5. Walking access to public transport max 500 m
6. Each region has a feeder that is integrated with the trunk through one node
7. The node must have pedestrian and park and ride facilities, with a max transfer distance 500 m
8. Maximum 3 times transfer mode in 1 trip

Greater Jakarta Transport Authority

MAIN TARGET : INCREASING PUBLIC TRANSPORT SHARE

2016	2019	2024	2029
24%	32%	50%	60%

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GREATER JAKARTA TRANSPORTATION MASTERPLAN 2018-2029 (PRESIDENTIAL DECREE 55/2018)

GREATER JAKARTA POLICY DIRECTION

TRAFFIC MANAGEMENT

- Supervision
- Control
- Traffic Information Dissemination

ROAD

- Construction
- Management

PUBLIC TRANSPORT

- Construction
- Regulation
- Integration
- Management

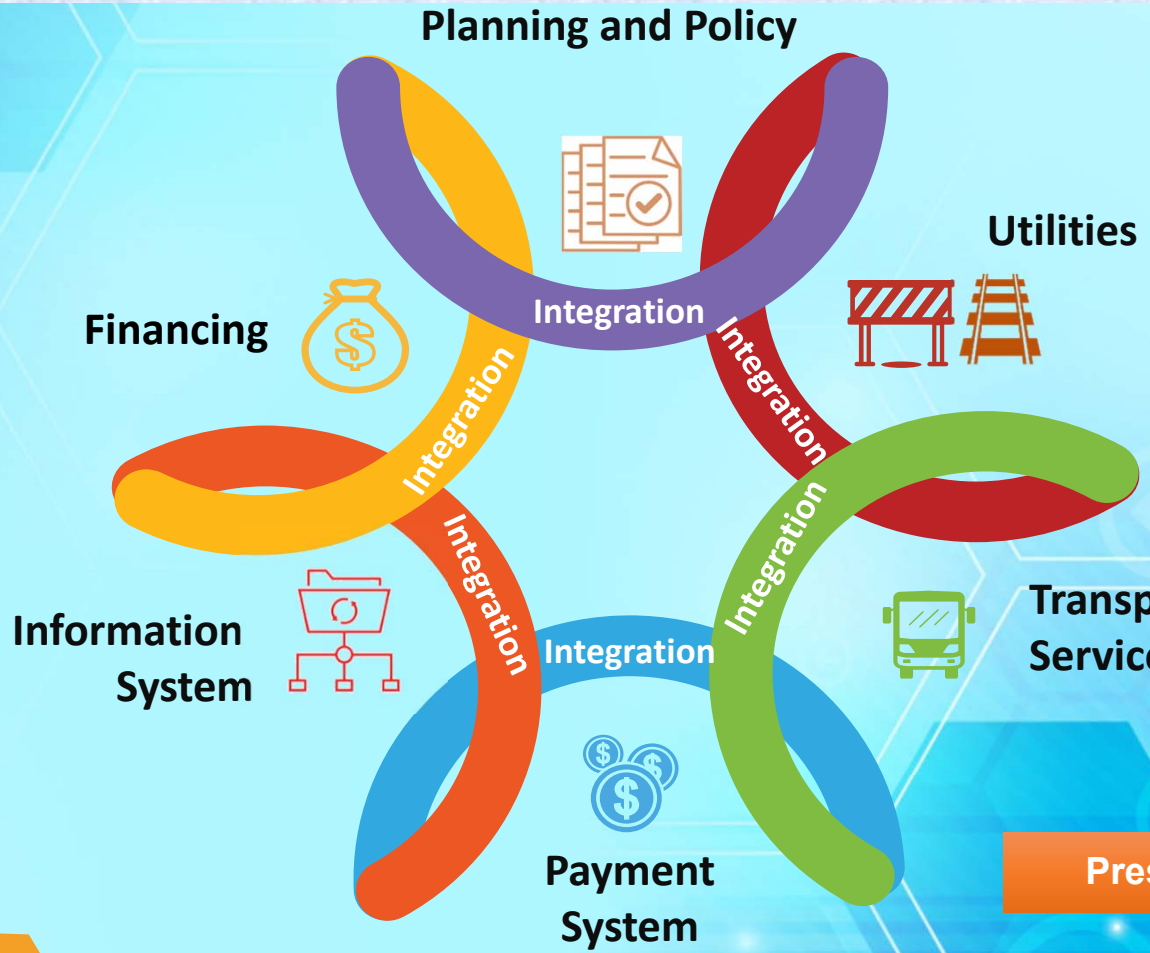
URBAN PLANNING

- TOD
- Land Use Planning
- City Development

F#J#R #V#V V H#F#W#R #J######L#Q #W#H#J #J#D #W#L#R #Q

Greater Jakarta Transport Authority

INTEGRATION POLICY DIRECTION



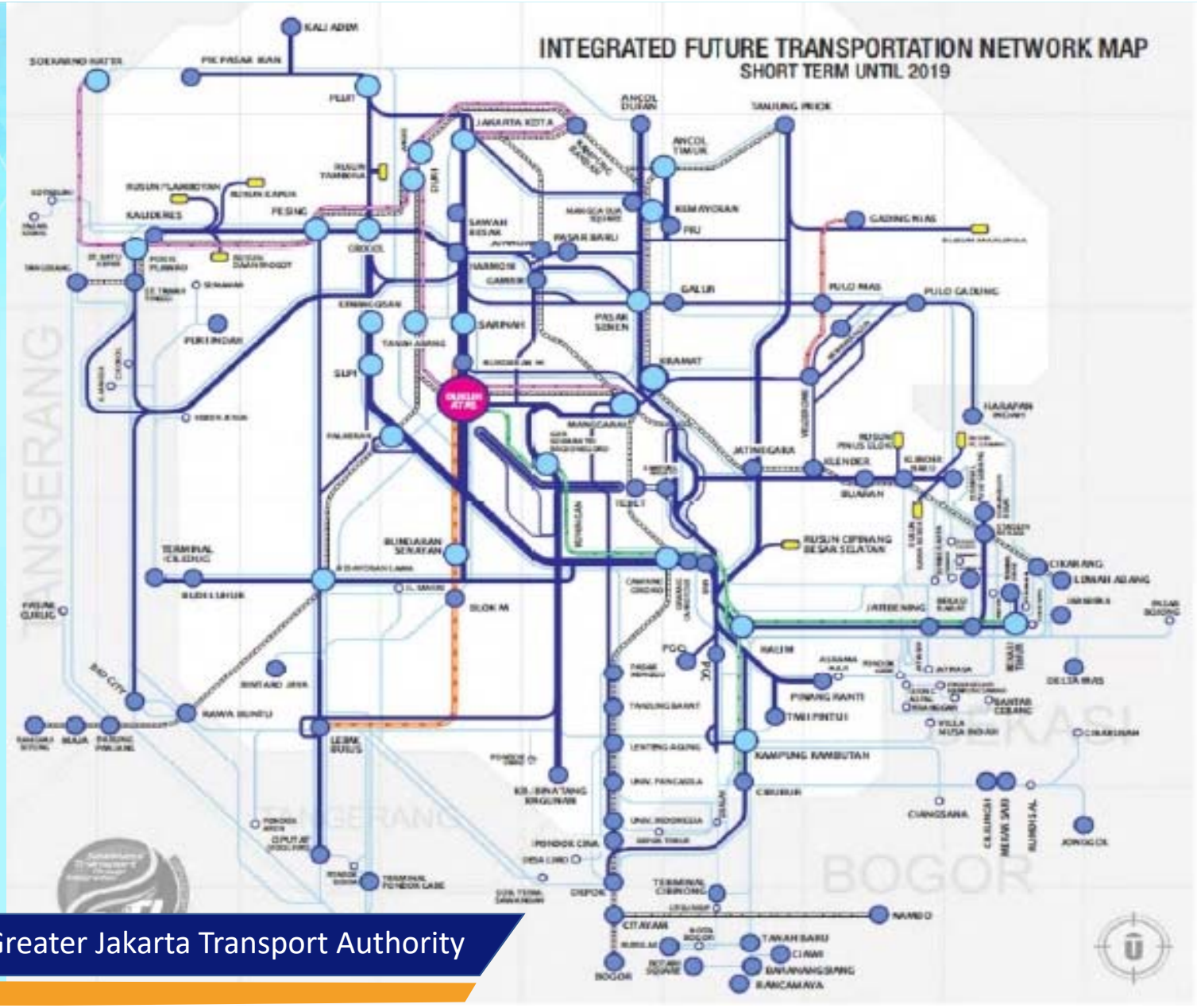
Seamless Transport Through Integration

BPTJ

BADAN PENGELOLA TRANSPORTASI JABODETABEK

Presidential Decree No.103/2015 Article 3 Paragraph (3)

PUBLIC TRANSPORT IN GREATER JAKARTA



Greater Jakarta Transport Authority

AREA TRAFFIC CONTROL SYSTEM

DEVELOPMENT OF PUBLIC TRANSPORT IN GREATER JAKARTA

OPERATED

- Commuter Line (CL) PT. KCI
- Bus Rapid Transit (BRT) PT. TransJakarta
- APMS, Soekarno-Hatta Airport
- Airport Train, PT. RailLink

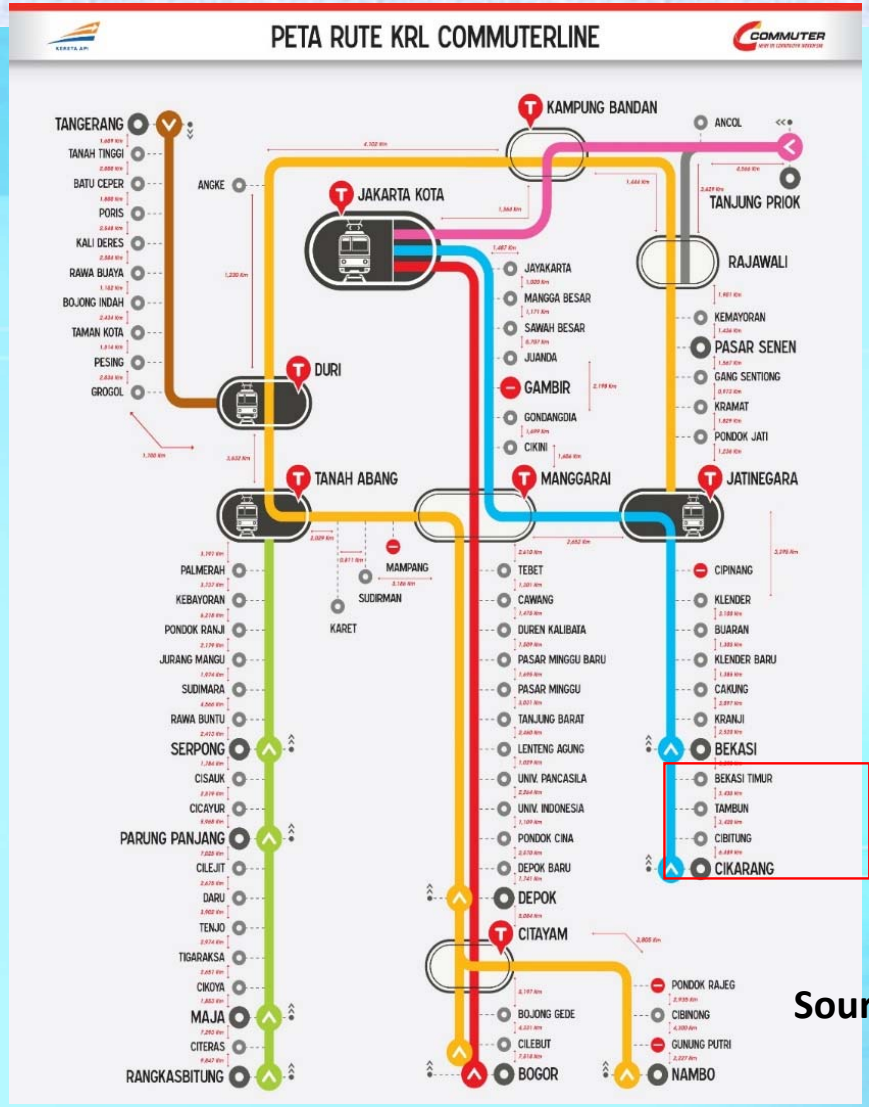
ON PROGRESS

- LRT Jabodebek, MOT & Adhi Karya
- LRT JAKPRO, DKI Jakarta Gov't
- Mass Rapid Transit (MRT), PT. MRT Jakarta

PLAN

- Jakarta – Bandung High Speed Train (KCIC)
- LRT Jababeka
- Elevated Loopline
- Double Double Track

COMMUTER LINE / KRL



Operational Area:

1. **Bogor/Depok – Jakarta Kota**
2. **Bogor/Depok/Nambo – Duri/ Jatinegara**
3. **Bekasi – Jakarta Kota**
4. **Rangkasbitung/Maja/ Parung Panjang/ Serpong – Tanah Abang**
5. **Tangerang – Duri**
6. **Tanjung Priok – Jakarta Kota**

✓ **Total route length: 384.5 km (per 23rd May 2017)**

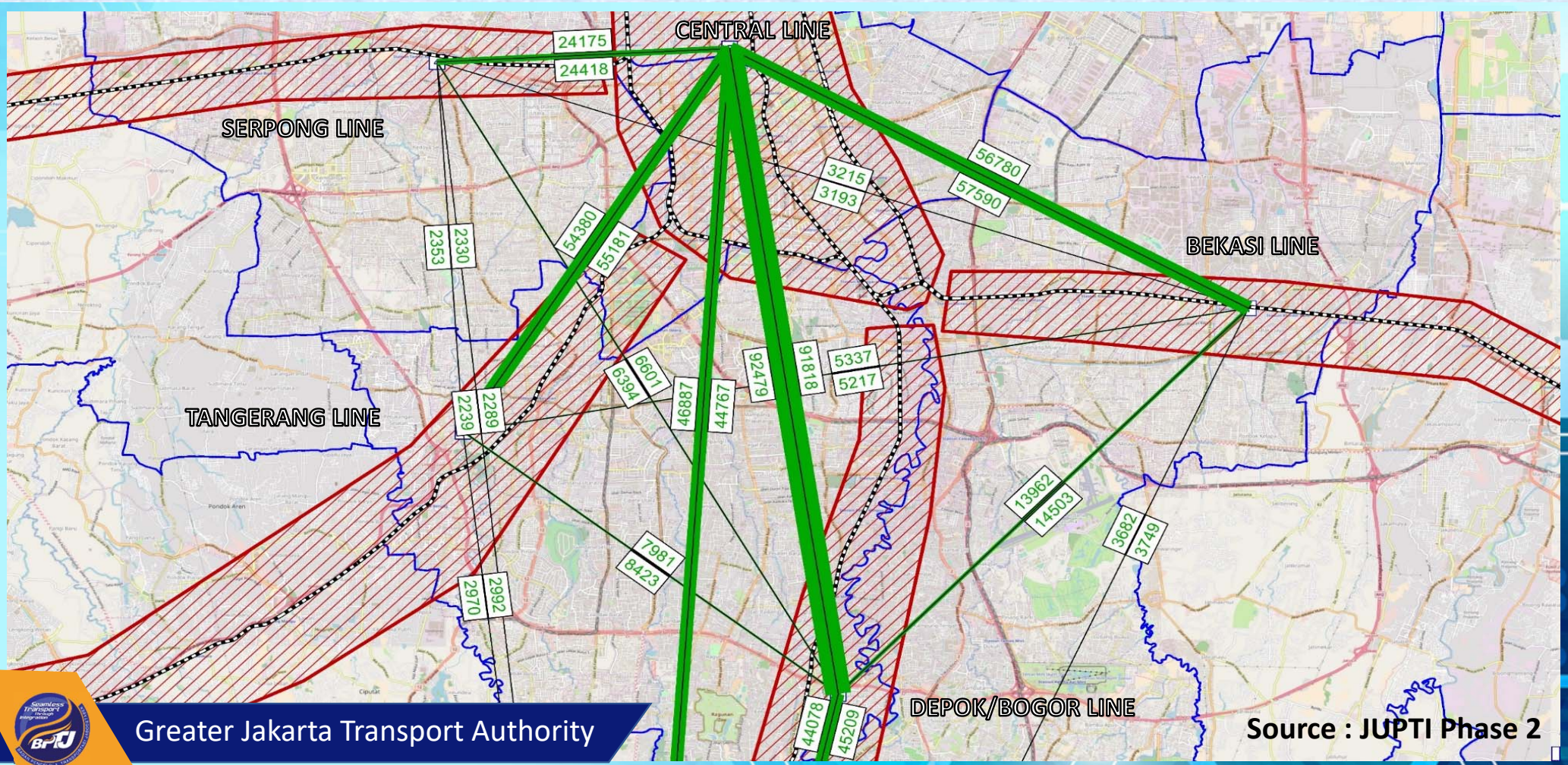
New stations operated on 8th October 2017 with total route length 16.6 km

Source : JUPTI Phase 2

20th September 2017

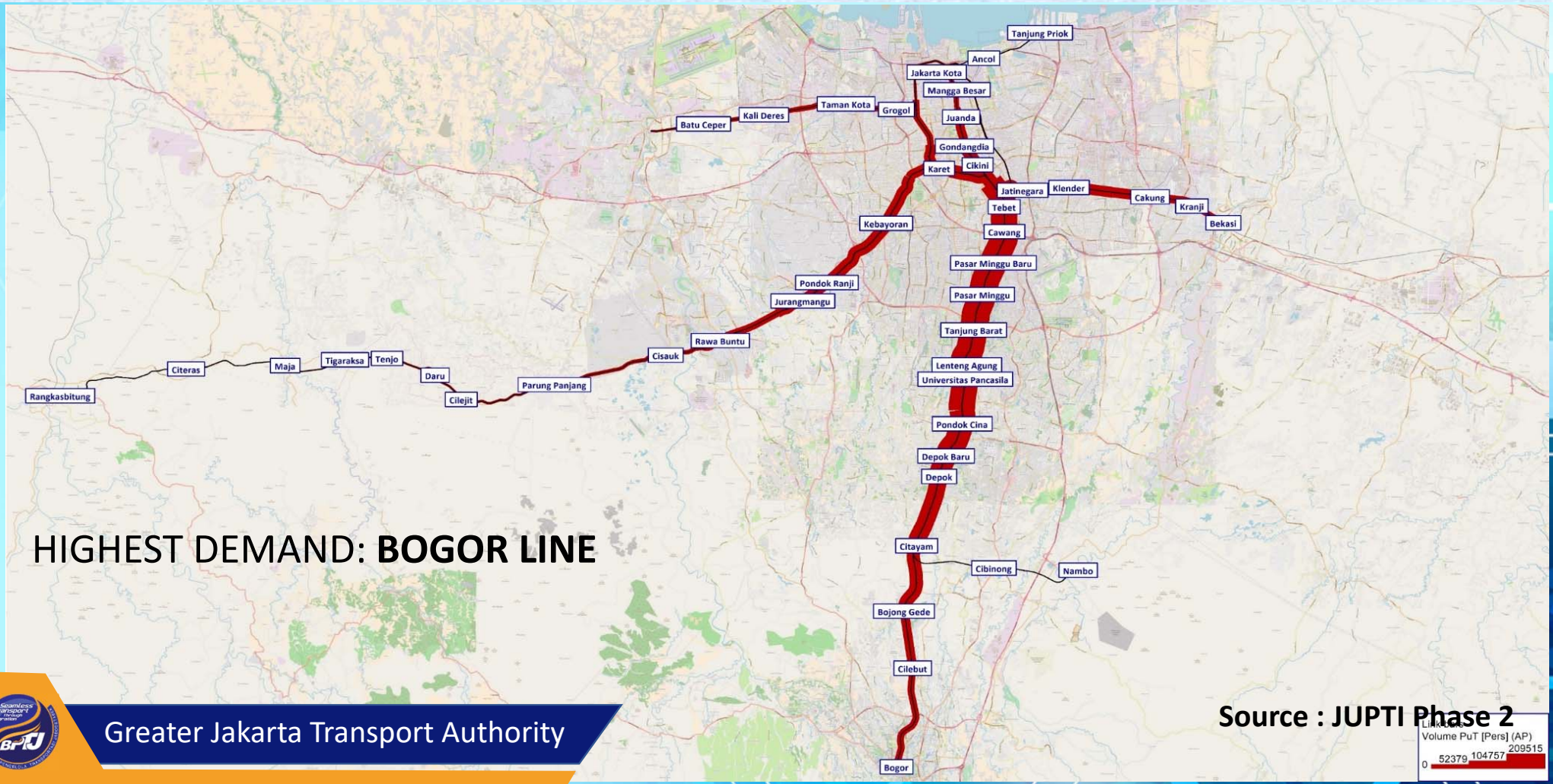
- ✓ PT KAI Commuter Jabodetabek (**KCJ**) has changed its name to PT Kereta Commuter Indonesia (**KCI**).
- ✓ The name change highlights the expansion of the commuter line's service. Now it reaches into Cikarang, Bekasi Regency, West Java.

Desire Lines (Daily Passenger) – Tuesday, 23rd May 2017



Source : JUPTI Phase 2

GREATER JAKARTA COMMUTER LINE DAILY BANDWITH



HIGHEST DEMAND: **BOGOR LINE**

Greater Jakarta Transport Authority

Source : JUPTI Phase 2

BUS RAPID TRANSIT (BRT)

- 13 **BRT Corridors**
- 90 **Routes**
- 325 **Self-owned Buses**
- 953 **Operator Buses**
- 12 Million **Monthly Passengers**
- Rp. 3.500,-

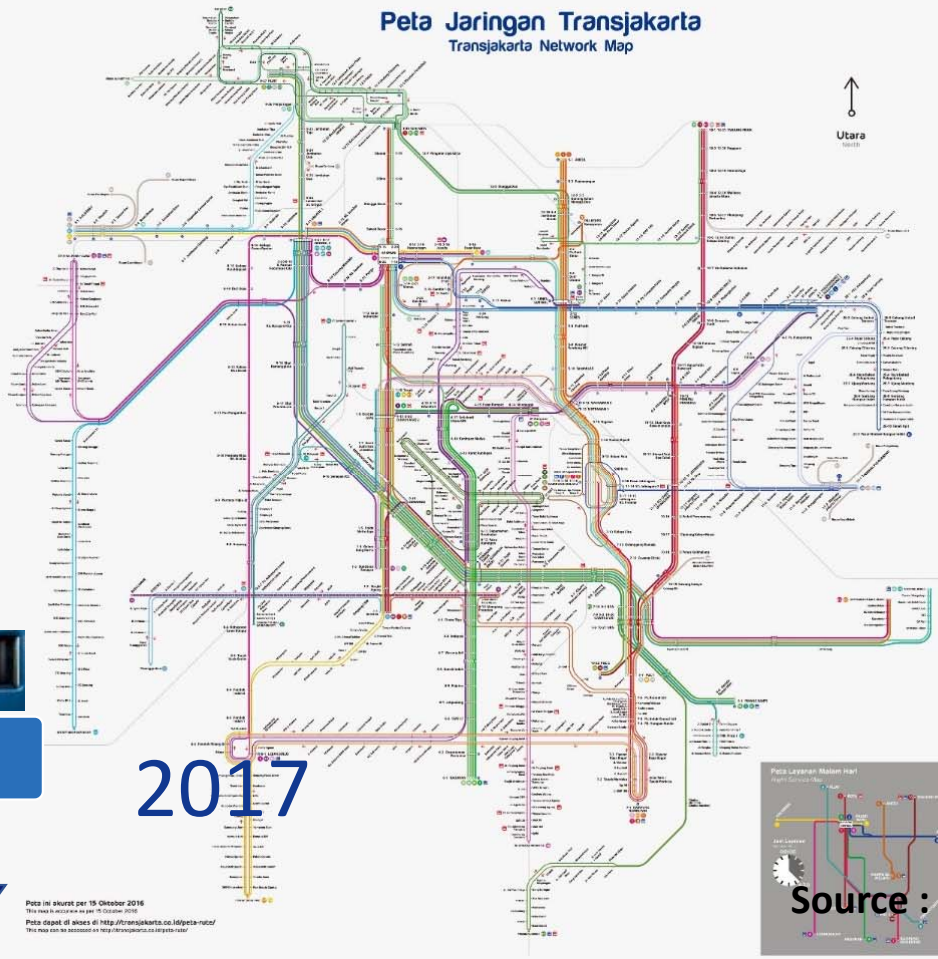
Ticketing System

Tap-In

Travel

Tap-Out

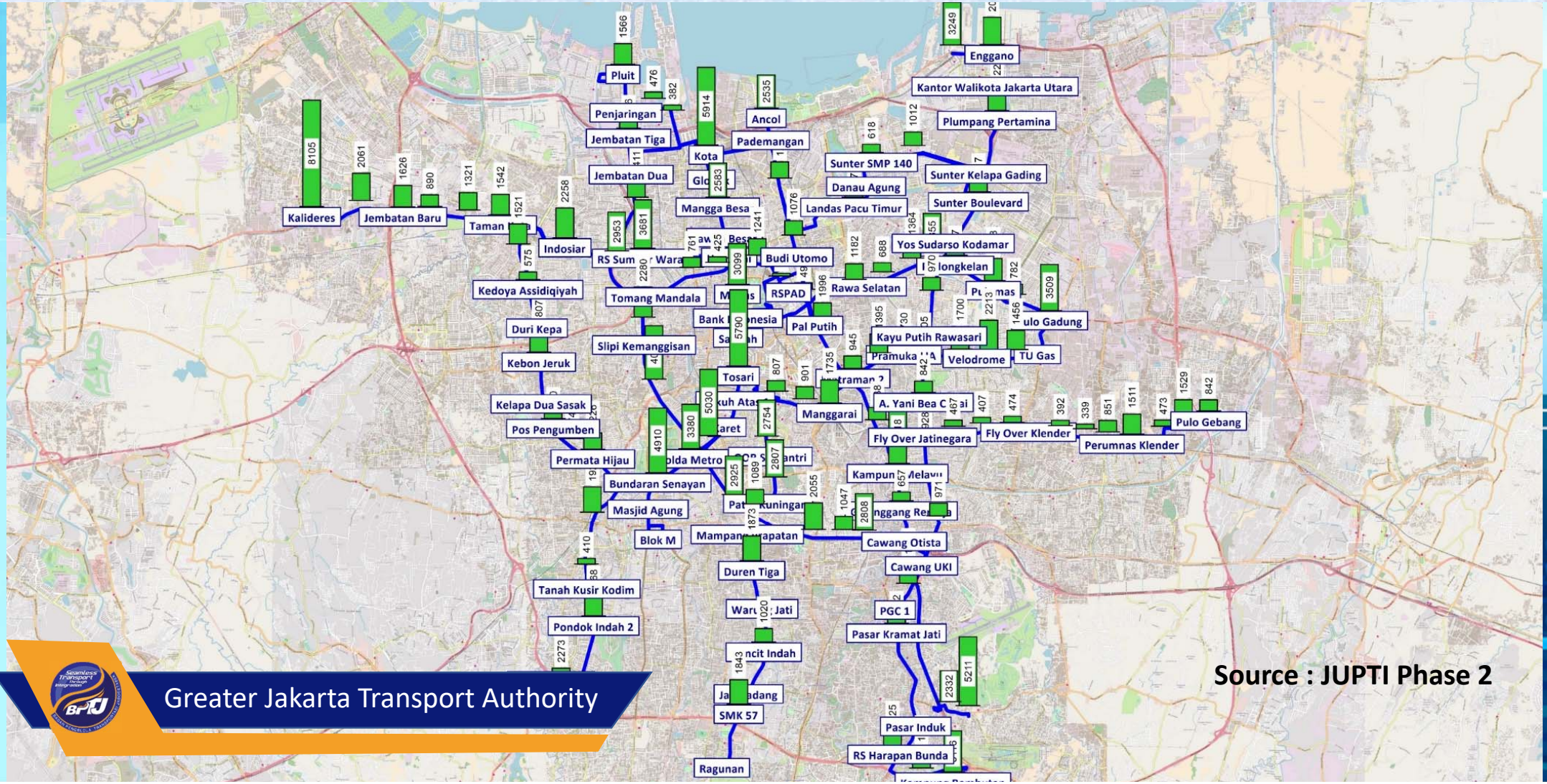
Source: PT. Trar



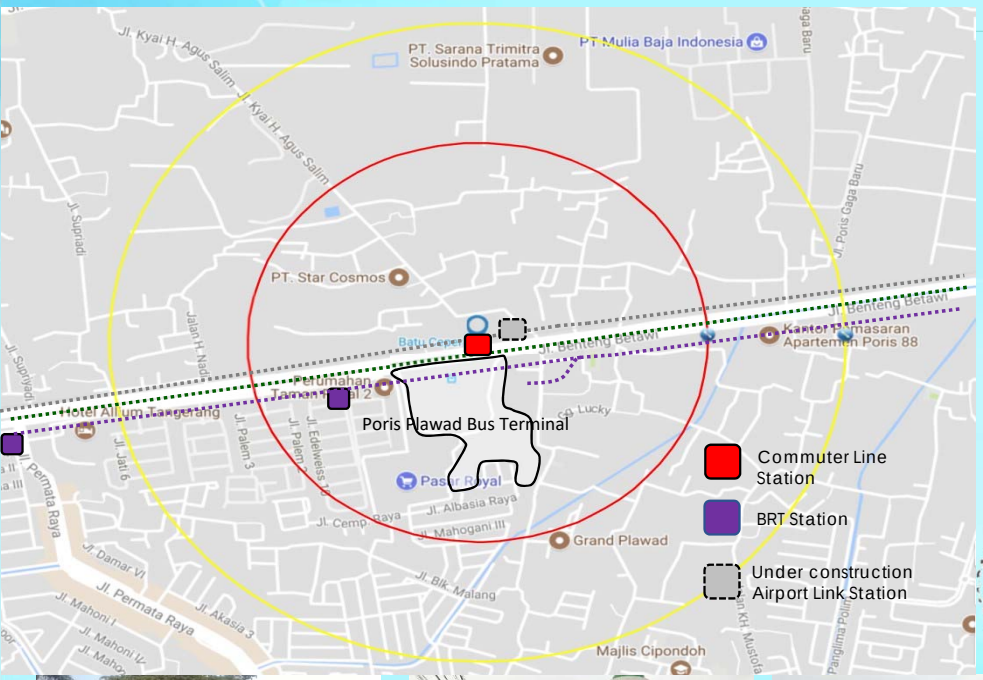
Source : JUPTI Phase 2

Greater Jakarta Transport Authority

TRANSJAKARTA DAILY PASSENGER DEMAND (BY SHELTER)



TOD MODEL PROJECT (PORIS PLAWAD)



EFECTIVITTY of Enhancement of PUBLIC TRANSPORT

Poris Plawad will be accessed by Commuter Line, Airport Train, BRT, and intercity bus. There will be one of the important Public transport transit location in the region.

Position on Local government's Policy

Development of Poris Plawad and Batu Ceper Station has stated in Regional Spatial Plan (RTRW) of Tangerang City.

Location

Some strengths of this area are topography, high rescilience, adequate facilities, and land value capture. (Soekarno Hatta International airport and around 1 hour from Jakarta)

Applicability for another TOD project

Poris Plawad is local city transport terminal and it can be applied to local transport hub's TOD project not only in JABODETABEK but also in Indonesia.

Economy and Society Impact

TOD reduces travel times, congestion, emissions and expanding access to different areas of the city and thus stimulating economic activity

train station


High Density & Unorganized Residential near train station


Batu Ceper Station and Airport Link Station


Condition of Pavement Area in Jl Benteng Betawi

Poris Plawad is the most appropriate location for TOD Model Project because of its potential, feasibility, and applicability

Greater Jakarta Transport Authority

Source : JUPTI Phase 2

4 LIGHT RAPID TRANSIT (LRT)

MOT / PT. ADHI KARYA

Greater Jakarta Transport Authority

PROJECT PROFILE

1. BASED ON PRESIDENTIAL DECREE NO. 98/2015 PT ADHI KARYA AND PT. KERETA API INDONESIA ASSIGNED TO BUILD
2. TOTAL COST 27 TRILIUN

IDR 24 TRILIUN FOR INFRASTRUKTUR

IDR 3 TRILIUN FOR TRAIN

PT. ADHI KARYA AND PT. KAI BEAR BUDGET REQUIREMENT OF 9 TRILIUN AND THE REMAINING 18 TRILIUN BY THE BANKING SYNDICATION

PROJECT PROFILE

PERPRES 98 TAHUN 2015

PRESIDEN
REPUBLIK INDONESIA

PERATURAN PRESIDEN REPUBLIK INDONESIA

NOMOR 98 TAHUN 2015

TENTANG

PERCEPATAN PENYELENGGARAAN KERETA API RINGAN/
LIGHT RAIL TRANSIT TERINTEGRASI DI WILAYAH
JAKARTA, BOGOR, DEPOK, DAN BEKASI

DENGAN RAHMAT TUHAN YANG MAHA ESA

PRESIDEN REPUBLIK INDONESIA,

Menimbang : a. bahwa untuk meningkatkan pelayanan transportasi dalam mendukung pembangunan di wilayah Jakarta, Bogor, Depok, dan Bekasi, perlu dilakukan percepatan penyelenggaraan Kereta Api Ringan/*Light Rail Transit* terintegrasi di wilayah Jakarta, Bogor, Depok, dan Bekasi yang ramah lingkungan;

b. bahwa untuk percepatan penyelenggaraan Kereta Api Ringan/*Light Rail Transit* terintegrasi sebagaimana dimaksud pada huruf a, Pemerintah menugaskan Badan Usaha Milik Negara;

c. bahwa berdasarkan pertimbangan sebagaimana dimaksud huruf a dan huruf b, perlu menetapkan Peraturan Presiden tentang Percepatan Penyelenggaraan Kereta Api Ringan/*Light Rail Transit* terintegrasi di wilayah Jakarta, Bogor, Depok, dan Bekasi;

Mengingat : 1. Pasal 4 ayat (1) Undang-Undang Dasar Negara Republik Indonesia Tahun 1945;

CHANGES

SUBSECTION 2

- 1st sentence: Aditional scope of work for Depo
- 2nd sentence: The use of rail road width of 1.435 mm
- 5th sentence: The construction work of Jabodebek LRT is constructed since signed PERPRESS

SUBSECTION 3

- The change of flow and process of contractual timeline in LRT JABODEBEK

SUBSECTION 7

- The payment will be done in every service lines. PT Adhi Karya (Persero) Tbk will be paid after finishing and constructing every service lines.
- The fund will be allocated from Anggaran Belanja Kementerian Perhubungan
- The contract agreement is done by the ministry of finance

SUBSECTION 8

- The price includes the bank interest in construction period (during construction) and the payment period

SUBSECTION 14

- Having License from the related area that is passed by LRT JABODEBEK routes

SUBSECTION 16

- PT KAI have been assigned as means organizer, operator, and sustainers

PERPRES 65 TAHUN 2016

PRESIDEN
REPUBLIK INDONESIA

PERATURAN PRESIDEN REPUBLIK INDONESIA

NOMOR 65 TAHUN 2016

TENTANG

PERUBAHAN ATAS PERATURAN PRESIDEN NOMOR 98 TAHUN 2015
TENTANG PERCEPATAN PENYELENGGARAAN KERETA API RINGAN/*LIGHT RAIL TRANSIT* TERINTEGRASI DI WILAYAH JAKARTA, BOGOR, DEPOK, DAN BEKASI

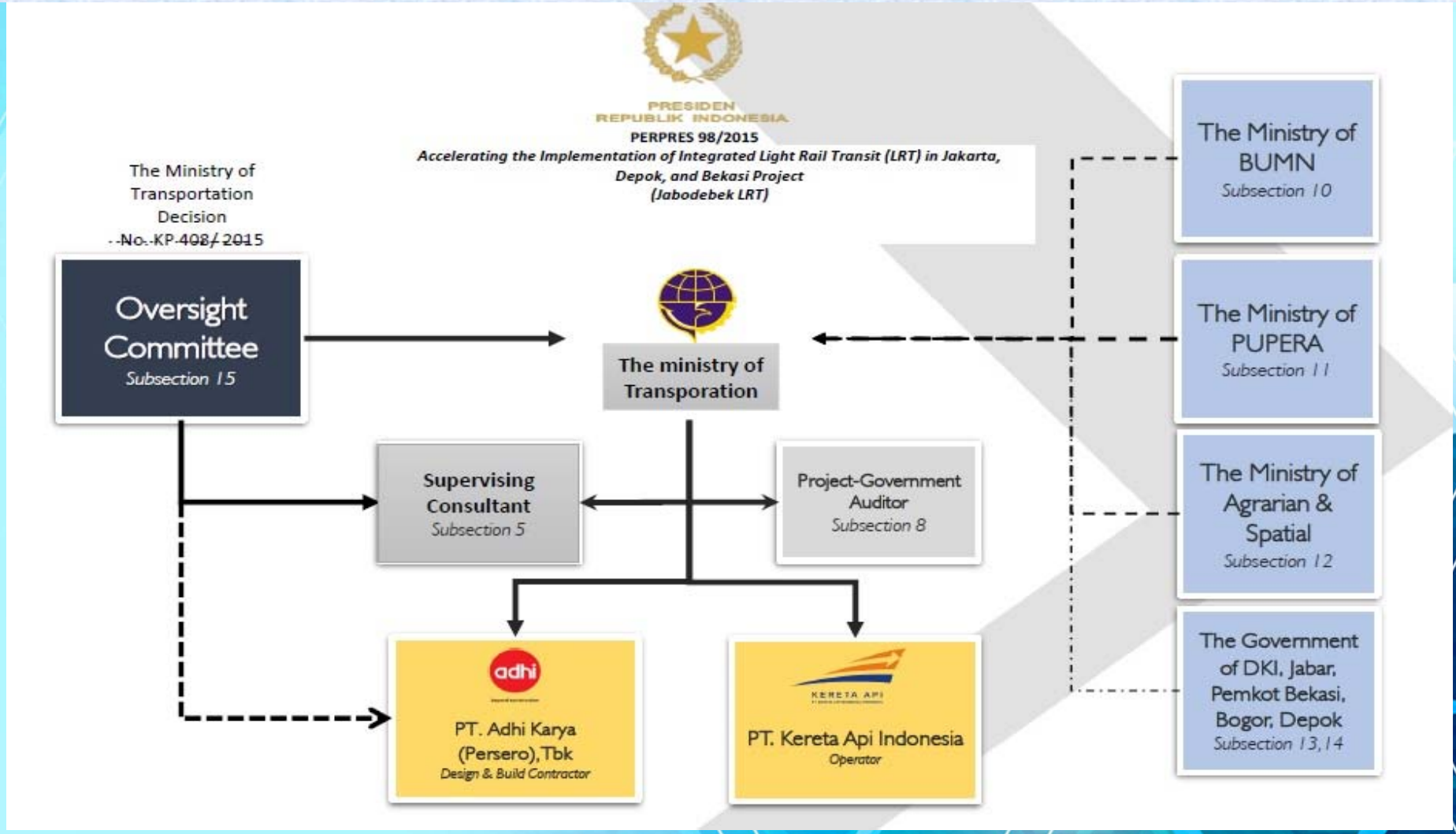
DENGAN RAHMAT TUHAN YANG MAHA ESA

PRESIDEN REPUBLIK INDONESIA,

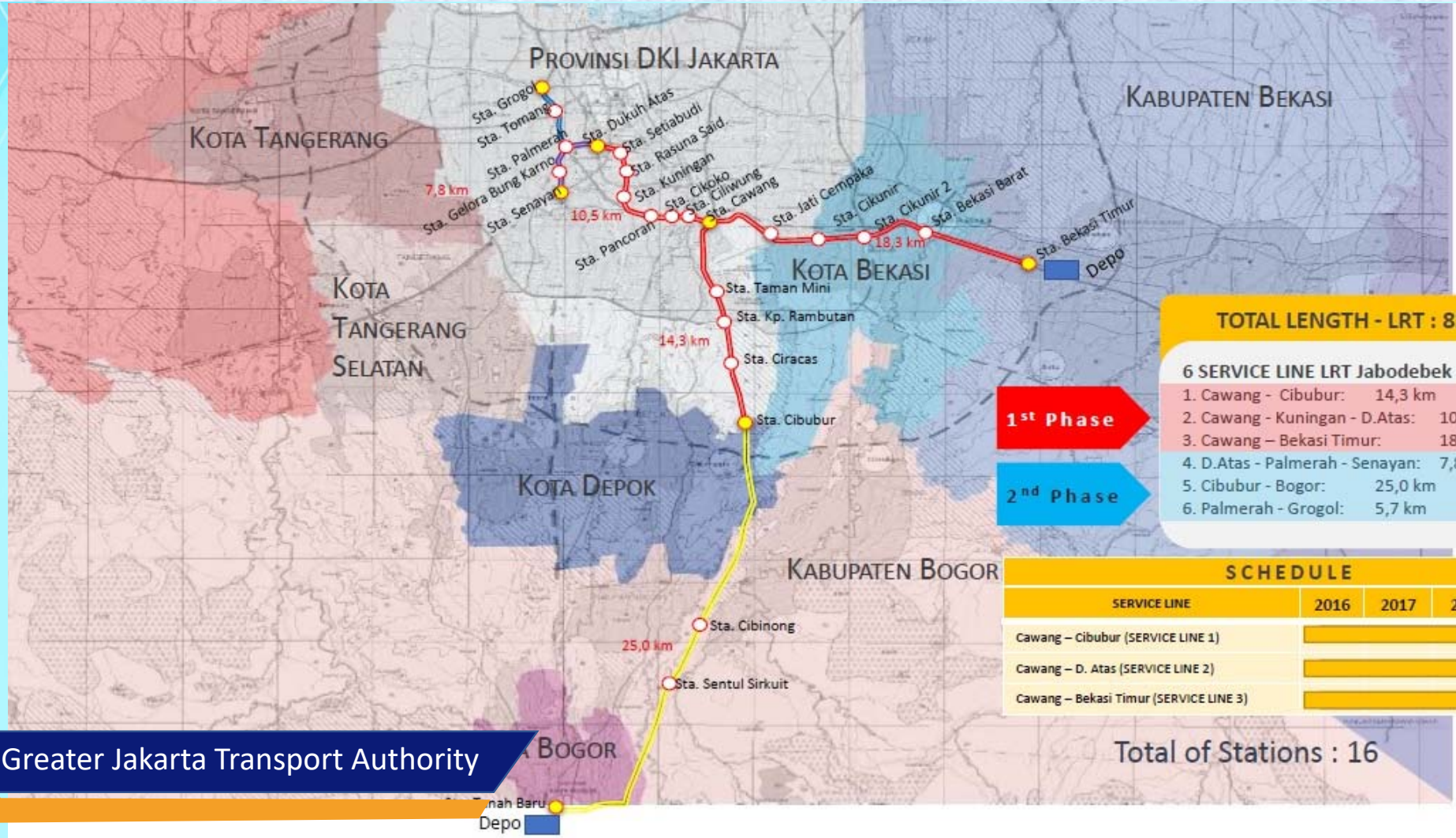
Menimbang : a. bahwa dalam rangka percepatan Penyelenggaraan Kereta Api Ringan/*Light Rail Transit* terintegrasi di wilayah Jakarta, Bogor, Depok, dan Bekasi, perlu melakukan penyempurnaan terhadap pengaturan mengenai pelaksanaan penugasan pembangunan prasarana dan penyelenggaraan sarana Kereta Api Ringan/*Light Rail Transit* terintegrasi di wilayah Jakarta, Bogor, Depok, dan Bekasi;

b. bahwa berdasarkan pertimbangan sebagaimana dimaksud dalam huruf a, perlu menetapkan Peraturan Presiden tentang Perubahan atas Peraturan Presiden Nomor 98 Tahun 2015 tentang Percepatan Penyelenggaraan Kereta Api Ringan/*Light Rail Transit* terintegrasi di wilayah Jakarta, Bogor, Depok, dan Bekasi;

PROJECT PROFILE



LRT JABODEBEK (AN OVERVIEW)



TOTAL LENGTH - LRT : 81,6 KM

6 SERVICE LINE LRT Jabodebek

1st Phase	1. Cawang - Cibubur:	14,3 km
	2. Cawang - Kuningan - D.Atas:	10,5 km
	3. Cawang – Bekasi Timur:	18,3 km
2nd Phase	4. D.Atas - Palmerah - Senayan:	7,8 km
	5. Cibubur - Bogor:	25,0 km
	6. Palmerah - Grogol:	5,7 km

SCHEDULE

SERVICE LINE	2016	2017	2018	2019
Cawang – Cibubur (SERVICE LINE 1)				
Cawang – D. Atas (SERVICE LINE 2)				
Cawang – Bekasi Timur (SERVICE LINE 3)				

Total of Stations : 16

LRT JABODEBEK – SERVICE LINE 1

50%

PROGRESS ON AUGUST 2018

LRT JABODEBEK | SERVICE LINE 1

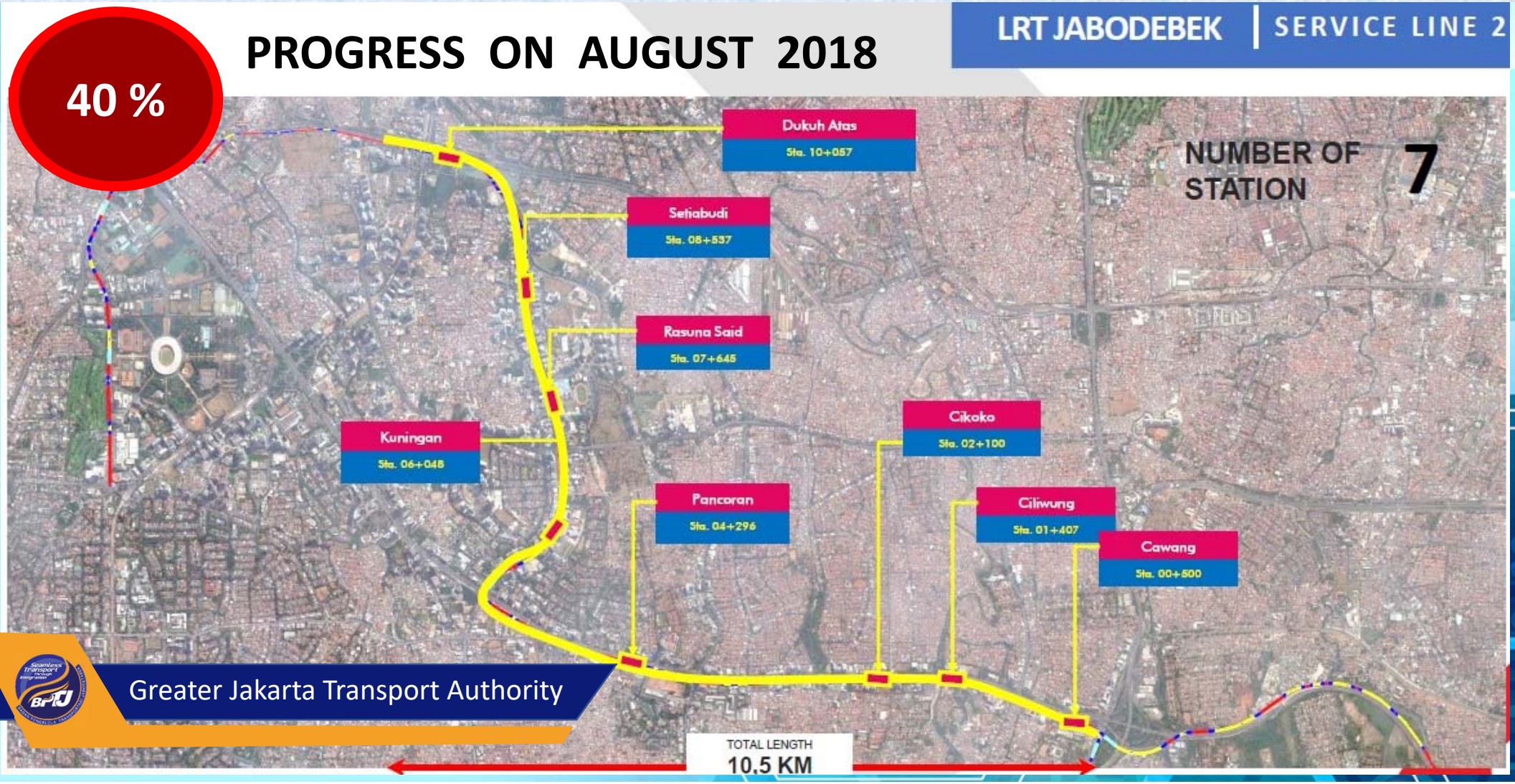
NUMBER OF STATION 4

Greater Jakarta Transport Authority

LRT JABODEBEK – SERVICE LINE 2

40 %

PROGRESS ON AUGUST 2018



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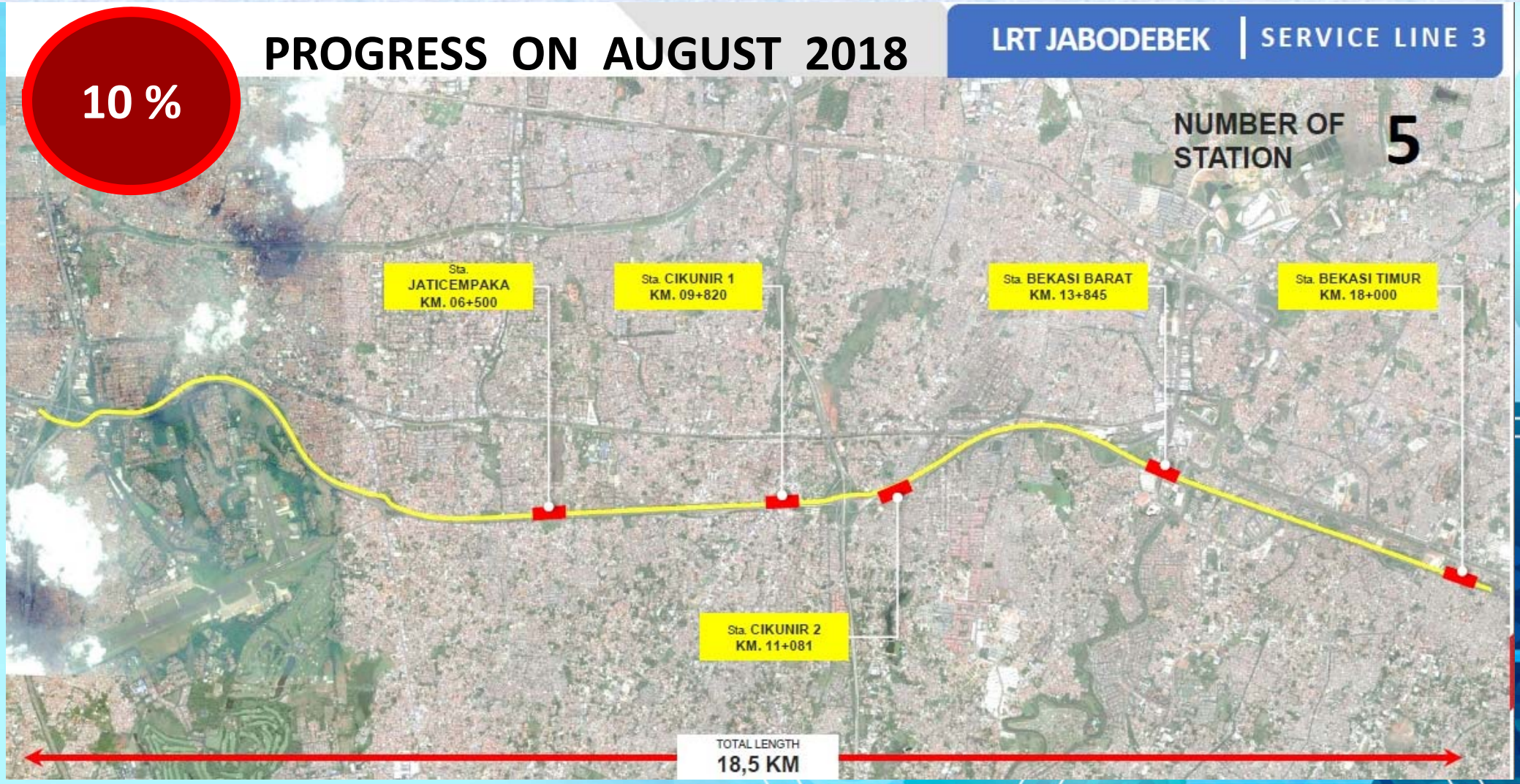
LRT JABODEBEK – SERVICE LINE 3



5 LIGHT RAPID TRANSIT (LRT)

PT. JAKPRO

Greater Jakarta Transport Authority

PROJECT PROFILE

1. BASED ON PRESIDENTIAL DECREE NO. 99/2015 PROVINCE GOVERNMENT OF JAKARTA TO ASSIGNED REGIONAL OWNED ENTERPRISES TO BUILD AND OPERATE RAILWAY
2. GOVERNOR DECREE NO. 213/2015 AND NO. 211/2016 ASSIGN PT. JAKRPO TO DEVELOP LRT
3. TOTAL COST 6,8 TRILIUN RUPIAH (LOCAL BUDGET – JAKARTA PROVINCE GOVERNMENT)

PROJECT PROFILE

7 CORRIDOR LRT NETWORK PLAN

- **Total length of track for Asian Games 2018:** ± 5,8 km (including Depo)
- **Number of station LRT:** 6 Elevated Station

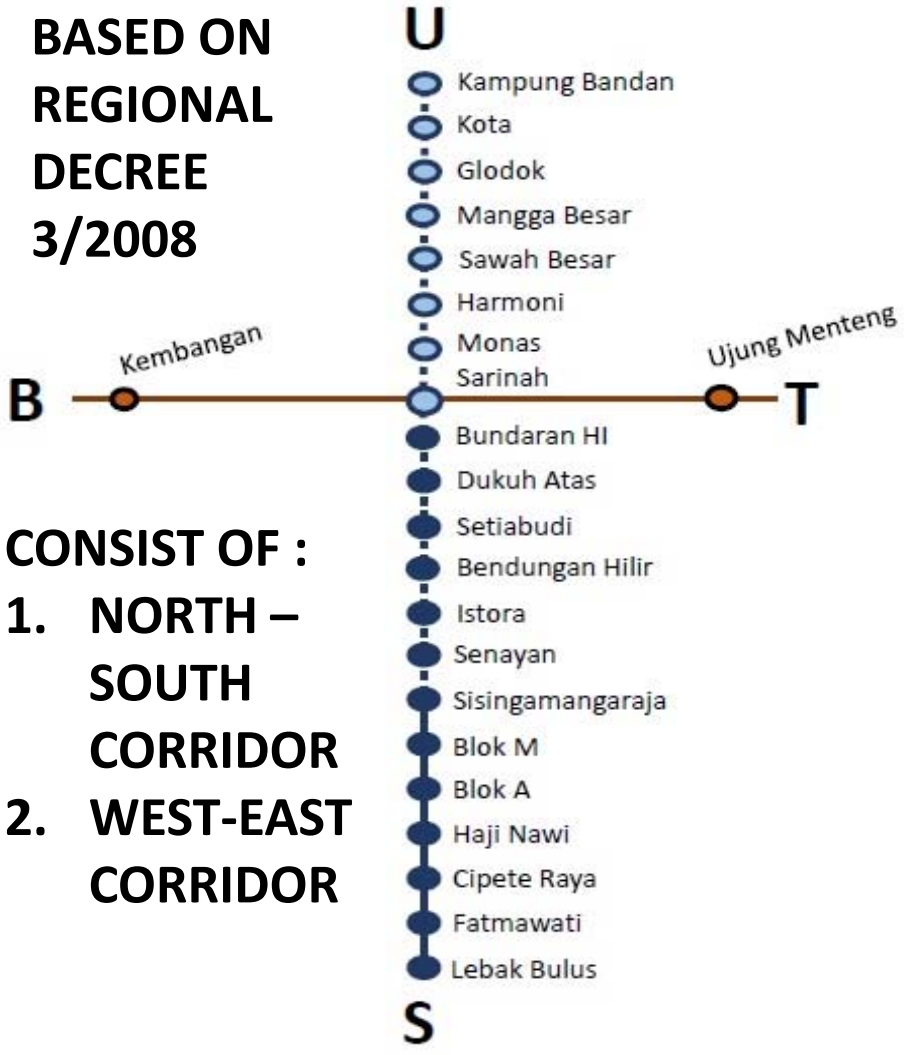
6 MASS RAPID TRANSIT (MRT)

PT. MRT JAKARTA

Greater Jakarta Transport Authority

PROJECT PROFILE

BASED ON REGIONAL DECREE 3/2008



CONSIST OF :

1. **NORTH – SOUTH CORRIDOR**
2. **WEST-EAST CORRIDOR**

1 Selatan – Utara (Lebak Bulus - Bund HI – Kampung Bandan)

Koridor	: Lebak Bulus – Bund. HI – Kampung Bandan
Panjang Jalur	: ± 25 Km
Metode Konstruksi	: Layang & Bawah Tanah
Jumlah Stasiun	: 21 (termasuk 2 Depo)

2 Timur – Barat

Koridor	: Cikarang – Balaraja
Panjang Jalur	: ± 87 Km
Jumlah Stasiun	: 41

Fase I	: Ujung Menteng – Kembangan
Panjang Jalur	: ± 27 Km
Metode Konstruksi	: Layang & Bawah Tanah
Jumlah Stasiun	: 22 (termasuk 2 Depo)

MRT JAKARTA CORRIDOR – PHASE I (NORTH-SOUTH LEBAK BULUS – BUNDARAN HI)

Lebak Bulus Depot

Pemuda Statue

Patung Bundaran HI

Lebak Bulus
Fatmawati
Cipete Raya
Haji Nawi
Blok A
Blok M
Sisingamangaraja
Senayan
Istora
Bendungan Hilir
Setiabudi
Dukuh Atas
Bundaran HI

7 Stasiun Layang (± 10 km)

13 Stasiun

6 Stasiun Bawah Tanah (± 6 km)

PROJECT FITURE JAKARTA MRT PHASE I

INFORMATION	
Travel Time	± 30 minutes
Track Length	± 16 km
Distance between stations	0,8 – 2,2 km
Headway	5 minutes (2019)
Operation Hours	05:00 – 24:00
Targeted Passengers	173,400 passengers/day
Rolling Stock	16 train sets (96 cars) 1 set = 6 cars
Track Gauge	1.067 mm
Electricity	60 MVA

Train Operation	Automatic Train Operation (ATO)
Signalling System	Communication-Based Train Control (CBTC)
Maximum Speed	• 100 km/h (Elevated corridor) • 80 km/h (Underground corridor) (Average: 32 km/h)
Operation will start on:	**March 2019**

Greater Jakarta Transport Authority

CONSTRUCTION PROGRESS PER JUNE 2018

92.54 %

DEPO & ELEVATED SECTION
CP 101 – CP 103

96.87 %

UNDERGROUND SECTION
CP 104 – CP 106

OVERALL

94.69 %

PROJECT PROGRESS PICTURES

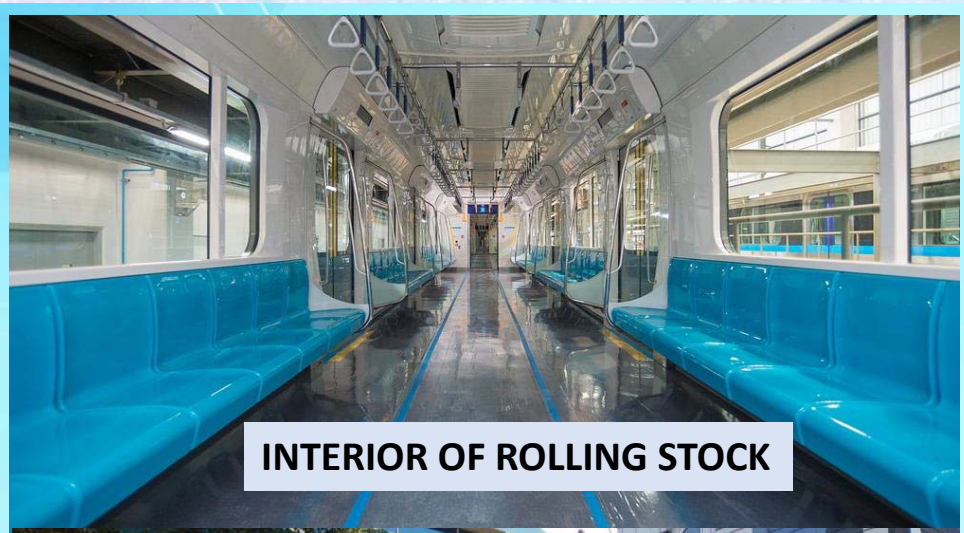
DEPO LEBAK BULUS

PLATFORM SCREEN DOOR

PLATFORM STASIUN SENAYAN

SCISSORS TRACK STASIUN BUNDARAN HI

PROJECT PROGRESS PICTURES



INTERIOR OF ROLLING STOCK

SIGNAL TRIAL IN DEPO

ENTRANCE DUKUH ATAS STATION

BENCHMARKING TO GET INTERNATIONAL STANDARD

PERDA NO. 3 TAHUN 2008
(Pasal 5)

"Pada saat Perkeretaapian Umum Perkotaan MRT Jakarta mulai dioperasikan, Perseroan berkontrak dengan Pemprov DKI Jakarta untuk memberikan pelayanan sesuai dengan standar pelayanan yang disepakati dengan mengacu kepada ***standar internasional"***

Dilakukan ***benchmark*** terhadap operator perkeretaapian urban lain untuk menentukan tingkat layanan yang harus dicapai oleh MRT Jakarta.

JR-EAST / 東京メトロ Tokyo Metro — Jepang	Operation & Maintenance Consulting Services
MTR — Hongkong	Rail + Property MRT Academy
Delhi Metro Rail Corporation Limited — India	Risk Management
Land Transport Authority — Singapura	Construction & Engineering
prasarana — Malaysia	Drivers Training

THANK YOU

DHAN'YABADA

Greater Jakarta Transport Authority