# TERMS OF REFERENCE

# PROJECT MANAGEMENT CONSULTANT (PMC) FOR THE PROPOSED METROPOLITAN BANDUNG AND METROPOLITAN MEDAN BUS RAPID TRANSIT (BRT) SYSTEM


## INDONESIA MASS TRANSIT PROJECT (IMTP)

**KEMENTERIAN PERHUBUNGAN**

**DIREKTORAT JENDERAL PERHUBUNGAN DARAT**

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**Acronyms**

| | |
|---|---|
| BBMA | Bandung Basin Metropolitan Area |
| BRT | Bus Rapid Transit |
| BRTME | Bus Rapid Transit Management Entity |
| CAPP | Community Involvement and Participation Plan |
| DED/CSC | Detailed Engineering Design / Construction Supervision Consultant |
| DGLT | Directorate General of Land Transportation |
| EMP | Environmental Mitigation Plan |
| ESIA | Environmental Social Impact Assessment |
| ESMF | Environmental and Social Management Framework |
| ESMP | Environmental and Social Management Plan |
| ILRP | Income and Livelihood Restoration Plan |
| IMTP | Indonesia Mass Transit Project |
| ITS | Intelligent Transport System |
| LARAP | Land Acquisition and Resettlement Action Plans |
| LGU | Local Government Unit |
| MASTRAN | Mass Transit Project |
| MOT | Ministry of Transport |
| PC | Project Preparation Consultant |
| PIU | Project Implementation Unit |
| PMC | Project Management Consultant |
| PMU | Project Management Unit |
| RAP | Resettlement Action Plan |
| ROW | Right Of Way |
| SEP | Stakeholder Engagement Plan |

# 1. INTRODUCTION

## 1.1 Background

**Congestion is among the main factors negatively impacting economic growth and equality of Indonesian cities**. Efficient mobility in urban areas is key to ensuring the economic competitiveness of cities. This is especially significant given that almost 60 percent of the Indonesian GDP originates from urban areas[1] which account for only 53 percent of the population. If the cities are congested and the workforce spends long unproductive hours commuting, the growth potential and productivity are compromised. Cities are labor markets and mobility is what makes that labor market work. An analysis by the World Bank Transport team on traffic speeds of Indonesian cities[2] found that they are slow, not only in peak periods but throughout the day, and especially for public transport vehicles. Consequently, average commuting times in Indonesian cities, especially for the poor and those dependent on public transport, is high compared to peer cities. High traffic congestion in Indonesian cities costs at least US$5.6 billion nationally per year (equivalent to 0.5 percent of national GDP) in terms of excess travel time, fuel consumption and greenhouse gas (GHG) emissions. Congestion is most severe in the Greater Jakarta area, where its costs exceed US$4 billion per annum and amounts to nearly 2 percent of GDP.

**Private transport dependence is increasing in Indonesian cities**. Much of the growth in Indonesia's urban population has been in urban areas remote from centers of employment and commerce. Residents need motorized transport to reach jobs, education and social activities and the coverage and quality of public transport provided does not offer a credible alternative to motorcycles and cars. This has resulted in unsustainable growth in car and motorcycle ownership (8.5 percent and 10.5 percent p.a. respectively, from 2007 to 2017) and consequently a high level of motorization (488 per 1,000 people in 2017; out of this, 430 were motorcycles).[3] The use of motorcycles is growing exponentially. In Greater Jakarta, share of motorcycle use has grown from 22 percent in 2002 to 78 percent in 2018[4].

## 1.2 The Project

The Government of Indonesia plans to implement the Indonesia Mass Transit Project (MASTRAN) ("the Project") with a view to addressing the critical mobility needs of Indonesian cities and improving liveability. The Project will cover institutional and capacity development and assistance with the development of a national program of assistance for mass transit in Indonesian cities, and investments in road-based mass transit systems in Bandung Basin Metropolitan Area (BBMA) and Mebidang (Kota Medan, Kota Binjai, Deli Serdang Regency).

The proposed MASTRAN will be the first phase of the national assistance program. It will help to finalize the program design, develop a pipeline of projects for the program, build institutional capacity and, through the implementation of select good practice mass transit systems, will have the necessary demonstrational impact for its scale up and to achieve more liveable cities in Indonesia.

MASTRAN will be jointly financed by the World Bank and Agence Francaise De Developpement (AFD). It consists of two components: (i) **Component I: Institutional**

[1] World Bank Urban Flagship Time To Act 2010 Report

[2] The analysis covered Greater Jakarta (Jabodetabek) and 28 other urban agglomerations including all cities with over 1 million population.

[3] World Bank analysis using Statistics Indonesia data ("Number of motor vehicles by types, Indonesia 1949-2017").

[4] Jabodetabek Transport Policy Integration 2, JICA, 2019

**Development, Capacity Building and Technical Assistance** activities to support the Ministry of Transport (MOT) and sub-national governments to roll out IMTP. It will also include project management and technical support to the two demonstration BRT projects; and (ii) **Component II: Demonstration Mass Transit Systems in Selected Urban Areas.** This component will support the implementation of safe, resilient, green and integrated mass transit projects in BBMA and Mebidang. These mass transit projects comprise:

- BBMA: A Bus Rapid Transit (BRT) system with an approximate length of 20.4 km running through the central area of BBMA. The system will include 17.3 km of segregated bus lanes, 3.1 km of mixed traffic lanes and 36 stations.
- Mebidang: A BRT corridor between Pinang Baris in the west and Amplas Bus Terminals in the southeast of Mebidang. The BRT corridor has a dedicated right of way with an approximate length of 21 km, 2 terminals and 31 stations.

The Ministry of Transportation (MOT) will be the implementing agency for the Project and responsible for project implementation and a Project Management Unit (PMU) has been established under the Directorate General of Land Transportation (DGLT) of the MOT. The provincial and city/ regency government for the Bandung and Medan projects will be key stakeholders during the design and implementation phase and will be responsible for the operations and maintenance of the BRT projects. DGLT proposes to hire a Project Management Consultant (PMC) to support the project management and operationalization of the two BRT Projects.

## 2. DESCRIPTION OF THE PROJECT

### 2.1 Bandung Basin Metropolitan Area (BBMA)

#### 2.1.1 General

The core city in the Bandung Basin Metropolitan Area (BBMA) is Bandung, the capital of West Java Province and the fourth largest city in Indonesia. The BBMA is Indonesia's second largest metropolitan area with over 11 million inhabitants.

Bandung has a low transit mode share. Only 11% of the motorized trips are made by buses and angkots. 25% of the trips are made by car and 71% by motorcycles. Bus and angkot demand are 330 thousand trips per day with 33 thousand trips in the peak hour.

Average speeds in the peak period are 9-11 km/h and 14-16km/h in the off-peak. There are bus stops but the angkots stop anywhere to collect passengers. They run at lower speeds to look for passengers and many times keep waiting for passengers in higher demand places.

#### 2.1.2 BBMA BRT Corridor Alignment

The proposed corridor follows the west-east city development axis. The west corridor is a natural path to link Cimahi in the west to Terminal Cicaheum in the northeast area. The corridor has 14.23 km of segregated lanes and 3 km of mixed traffic. BRT streets are generally one direction and segregated lanes are mostly curb side, except some segments on Jl Achmad Yani that has two directions. The corridor includes an extension to the center south area of Bandung down to Tepallenga Park. The BRT network can be extended later to include the ring formed by Jl Jamika/Peta/BKR/Pelajar Pejuang/Laswi and the southeast region through Jl Jendral Gatot Subroto and Kiaragondong, however this is not included within the current scope of services.


*Figure 1:BBMA BRT Corridor*

The BRT system is planned to ultimately consist of eighteen routes that operate within the BRT corridor, comprising nine core routes, three extended core routes, two additional priority routes and four additional secondary routes. The proposed BRT Route Network is shown in the following figure.

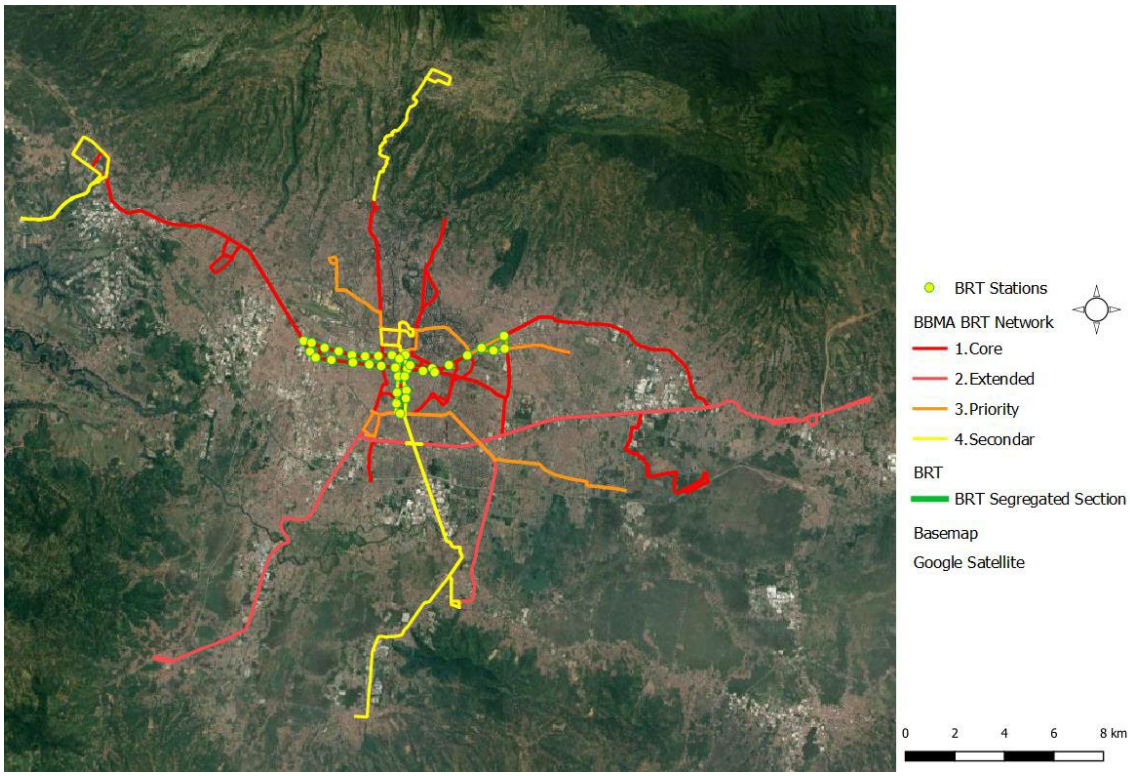



*Figure 2: BBMA BRT Routes*

The first phase of implementation covered by this assignment is currently envisaged to comprise the core, and extended core, routes as shown in the following tables and figures. Twelve services are planned to run on the nine core routes, with three additional routes on the extended core network.

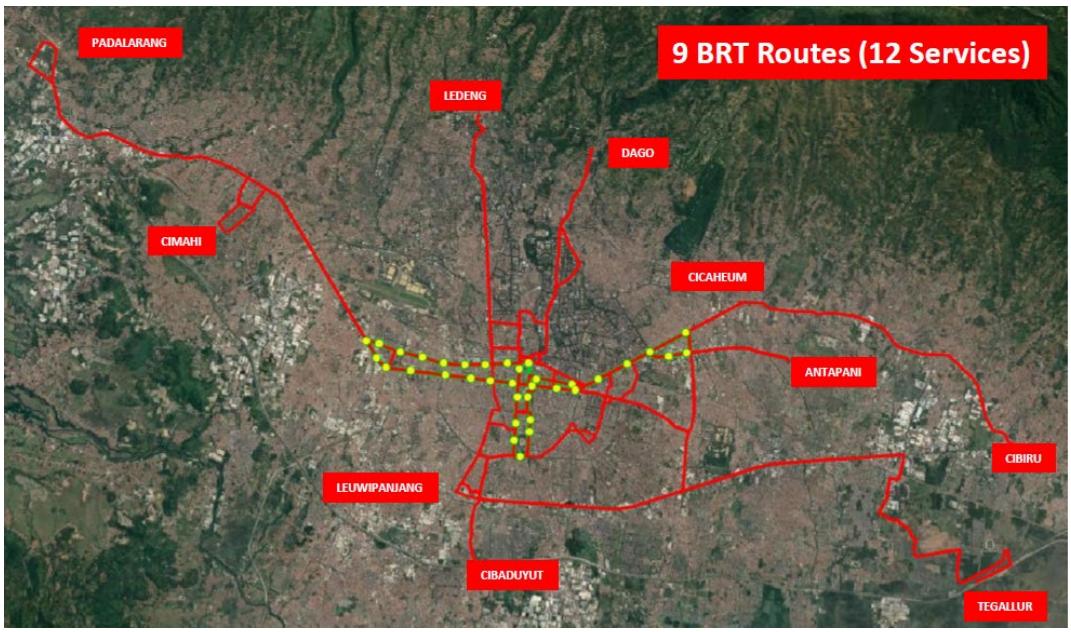



*Figure 3: BBMA Core Routes*


*Figure 4: BBMA Extended Core Routes*

The characteristics of the routes and services are shown in Figure 3 and 4.. where the infrastructure considers physically the BRT routes, while the service length considers all the BRT routes in operation. Thus, the infrastructure length excludes the overlap length between the routes

*Table 1: BBMA Route and service characteristics*

| | Core | Extended Core |
|---|---|---|
| Infrastructure Length* | 192 | 70 |
| Number of routes | 9 | 3 |
| Service Length | 361 km | 99 km |
| Number of services | 24** | 6 |
| Length within the BRT Corridor | 83 | 1 |
| % of the service length within the BRT Corridor | 23% | 1% |
| Operational fleet | 237 | 71 |
| Large Bus | 74 | 58 |
| Medium Bus | 163 | 13 |

** Sum of road length with 1 or more BRT routes (BRT segregated + non segregated corridor)*
***3 Routes have been split into 2 Services*

### 2.1.3 BRT Infrastructure Development

- Design will incorporate best practices in BRT infrastructure. ITDP BRT Manual and BRT Standards are good sources of design and best practices.
- The 14.23 km of exclusive bus lanes will be located either in the median of existing two-way roads, with central stations, or on curb side lanes with side stations on one-way roads. In the central area, the corridor operates using parallel one-way streets due to restricted road width.
- The 3km of mixed traffic sections are located where there is insufficient right of way for exclusive lanes
- The corridor will have 33 stations with an average distance of 530m between stations.
- Design will incorporate elements for a top end BRT:
  i) closed stations,

ii) automatic fare collection off-board,
iii) on level boarding,
iv) actions for flooding resilience and reduce impacts of seismic events,
v) BRT access infrastructure (footpaths, bicycle lanes, stations, traffic lights, street lighting and urban realm improvements) designed to reduce travel times and enhance safety, security, accessibility, and walkability of beneficiaries and
vi) optimized architectural designs to reduce fuel and electricity consumption by incorporating solar panels and rainwater collection.

- Design will consider location for UPS and power back-up at stations, terminals and other locations including necessary infrastructure provision for the same.
- Design will evaluate the convenience to use solar power energy for BRT stations and terminals.
- The designs and bidding documents will include technical specifications and key elements to address gender needs, PWD, and other vulnerable users by providing safe access to/out of stations (including bus stops), entrance to and exit from buses, as well availability of space in buses.
- All stops, stations, terminals, and other related infrastructure will be Covid informed.
- Design will need to consider resilience against flooding and other climate events.

### 2.1.4 Stations

The corridor will have 33 stations spaced between 500 and 600 m. 17 stations will be curbside stations and 16 stations will be center stations. Stations will be low floor to be on level with low floor buses (35cm height). The doors position will be positioned to support 9m, 12m and 18m articulated buses.

### 2.1.5 Terminals

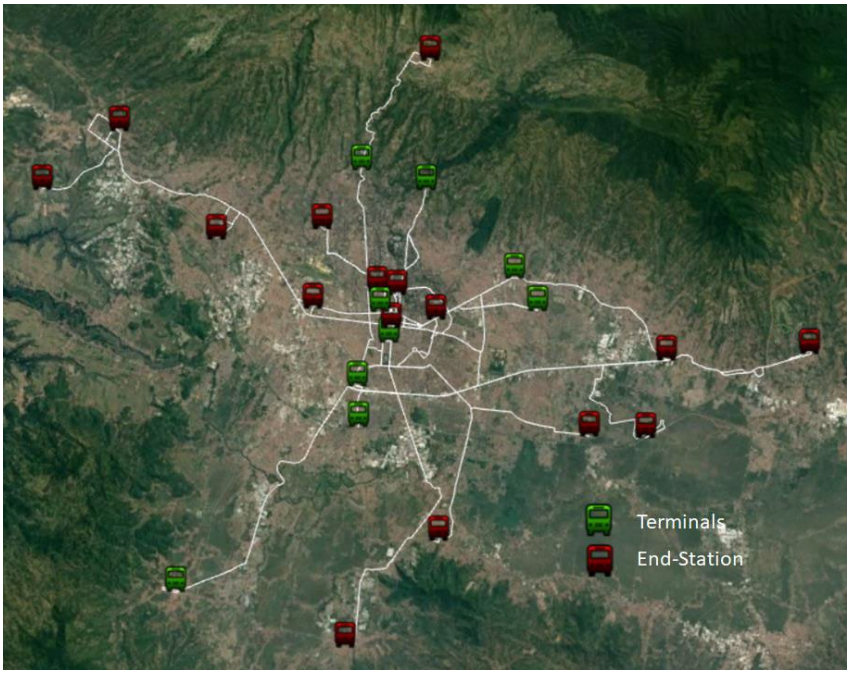



*Figure 5: BBMA Terminals*

The BBMA BRT system uses a direct services concept and will require 25 route terminals to function as:

- Start or end points of bus service routes
- Transfer points (bus interchanges)
- Layover facility
- On-service activity

The terminals comprise nine existing terminals, 3 railway stations and 13 end-stations.

Only eight of the existing terminals will be utilized by the new BRT system. These are Leuwipanjang, Cicaheum, Station Hall, Ledeng, Dago, Antapani, Cibduyut and Soreang. Kalapa terminal is excluded due to limited space and will only serve as end-station with no layover activities. Ten locations of end-stations will need to be designed to accommodate overnight layover of buses. Terminals will require the following facilities:

- Arrival/departure lanes
- Boarding alighting platform
- Bus parking/layover area
- Passenger waiting room
- Ticketing area
- Terminal office
- Passenger parking area
- Information board
- Service & supporting facilities (commercial kiosk, first aid post, toilets, security post, driver break room, etc)

### 2.1.6 Bus depots

Four depots are currently envisaged to accommodate the expected route structure and fleet size. The depots shall be designed to provide functions for fleet management (bus dispatching, bus maintenance, driver scheduling, fleet monitoring, etc), bus storage and off-services activity and shall provide facilities for:

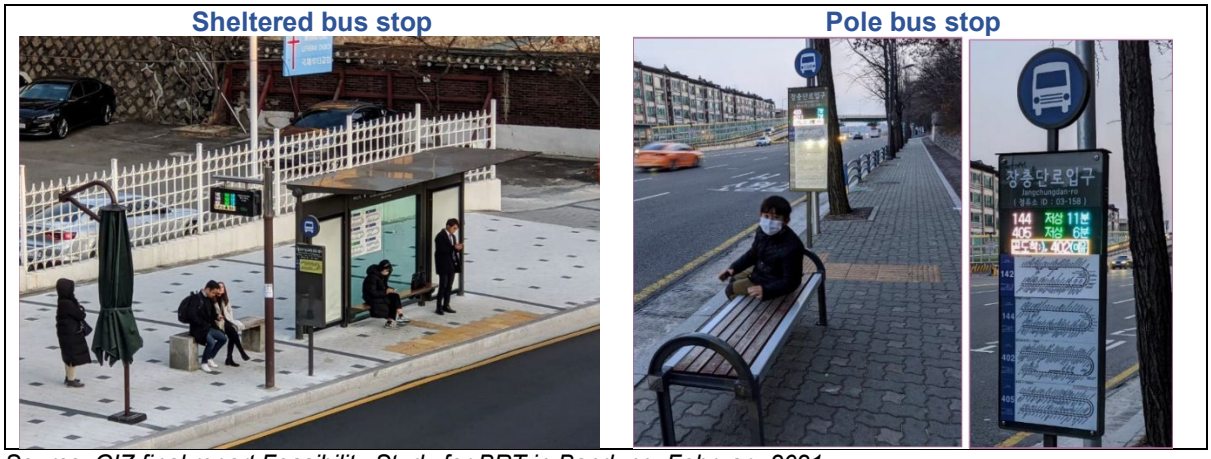
- Bus garage/parking area
- Bus washing & cleaning facility
- Re-fueling/charging station
- Maintenance workshop
- Bus inspection area
- Operator administrative & control room
- Staff facilities.

At the date of these TOR the depot locations were still being finalized. Two of the depots at Gedebage will be constructed under a Design and Build modality, while the remaining two depots will follow conventional design, bid and build procurement to be performed by the Detailed Engineering Design Consultant. The bus fleet is envisaged to use both diesel and battery electric buses and will incorporate the following features:

- Depots will be designed for e-buses overnight and off-peak charging infrastructure.
- Design will consider specifications for interoperability of different charging technologies.
- Depot's design will consider all functions required. As diesel buses will operate at the same time as e-buses, the depot will need to be designed for shared infrastructure for both types of technology.

### 2.1.7 Stops outside the BRT Infrastructure

The BRT system operates with direct services and there will be several bus stops outside the BRT infrastructure. A preliminary estimation indicates around 350 stops. 75% will be medium sized sheltered stops, 2% large sheltered-stops, and the remaining will be pole stops.




*Source: GIZ final report Feasibility Study for BRT in Bandung. February 2021*

*Figure 6: Examples of Bus Stops*

## 2.2 Mebidang

### 2.2.1 General

The functional area of Greater Medan, the capital of North Sumatra Province, covering the city of Medan and Binjai and the Regency of Deli Serdang, has a population of 4.4 million making it the largest metropolitan area outside of Java, and the fourth largest metropolitan area in the country. Medan is located in the north of Sumatra, in close proximity to the neighboring countries of Singapore and Malaysia.

Medan has a very low transit mode share, with only 7% of total trips. 80% of trips are made by motorcycles and 13% by cars. Daily demand by buses and angkots are only 300 thousand trips with 35 thousand in the peak hour. Angkots are responsible for over 93% of the transit trips.

Average speeds in the peak period are 10-12 km/h and 15-16km/h in the off-peak. There are bus stops but the angkots stop anywhere to collect passengers. They run at lower speeds to look for passengers and many times keep waiting for passengers in higher demand places.

### 2.2.2 Mebidang BRT Corridor Alignment

Planning BRT routes in Medan is quite challenging. Mostly, the road width in the CBD area is wide enough to accommodate large bus, but one-way policies are applied in this area due to high volume of peak traffic flow. Furthermore, the city is growing to the north to Belawan Port, west to Binjai and east to Lubuk Pakam, that creates significant residential area in those areas. This generates more additional travel movement and often burdens the road network in Medan city center. Along with the need of heritage building/sites preservation in Medan City, these issues were considered in planning the BRT corridor to obtain an effective and attractive service to users and efficient in an operational context.


*Figure 7: Overview of proposed Medan BRT alignment*

Eighteen kilometres of the corridor has 2 directions with only 3 km operating in a pair of one direction streets. However, this pair is mostly 300m apart and the rest is around 600 m apart. 22 of the 31 stations are in the middle of the road with traffic flows in both directions. 9 stations are in one direction streets and were designed also in the middle of the road. The location of the stations requires review in the DED design to identify the best design configuration.

- The 21km long corridor starts at Pinang Baris terminal in the west, going north on Jl. Tahi Bonar Simatupang turning east at Jl. Gatot Subroto.
- It follows Jl. Gatot Subroto until reaching the intersection (Mayestik junction) with Jl. H. Adam Malik and Jl. Guru Patimpus.
- At this point, the corridor is divided in two one direction corridors to cross the center of the city.
- Southbound: Jl. Gatot Subroto - turn right to Jl. Kapten Maulana Lubis, continue to Jl. Raden Saleh, and turn left to Jl. Balai Kota, then turn right to Jl. Bukit Barisan, turn right to Jl. Kereta Api and keep straight until reaching the intersection, then turn left to Jl. M.T. Haryono, in the next intersection, turn right at the Jl. Cirebon, and keep going until Jl. Sisingamangaraja (end of one direction corridor for Southbound).
- The two directions corridor starts from Jl. Sisingamangaraja and go to the South by following this road until the intersection with Jl. Panglima Denai. At this intersection, turn left to Jl. Panglima Denai, and the BRT corridor will end at Terminal Amplas (on the right).
- Northbound: Starts from Terminal Amplas at Jl. Panglima Denai, and turn right at the intersection to Jl. Sisingamangaraja, going north through this road until the intersection with Jl. Pandu/Jl. Hj Ani Idrus and Jl. Cirebon (2 directions corridor).
- The one direction corridor for the Southbound starts from the turn left at Jl. Pandu, and then at the intersection, turn right to Jl. Pemuda. Keep going straight to the North until

reaching Jl. Jenderal Ahmad Yani, then passed Jl. Balai Kota and Jl. Putri Hijau, and then turn left at the intersection to Jl. Guru Patimpus.

- It will reach the two-direction corridor at Jl. Gatot Subroto

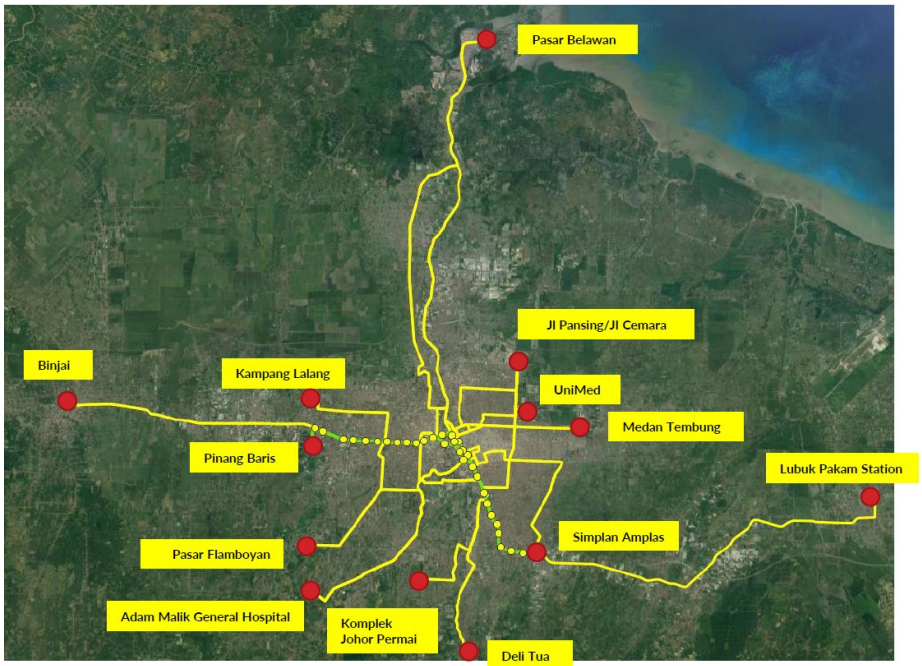



*Figure 8: Mebidang BRT routes*

Sixteen direct services, on fourteen routes are planned, with total service length of 541km. These routes will use a portion of the BRT corridor as shown in Figure 8.

Buses will be low-floor/low-deck and will have doors in both sides.

Two sizes of bus are proposed for Medan:

- Medium bus, 9-m long, will be used for routes that serve narrow segments
- Single large bus, 12-m long.

An operational fleet of 468 buses is envisaged for the full route network, comprising 395 large and 73 medium buses. Due to limitations on land availability for depots it is (at the date of these TOR) under consideration to implement an only a portion of the route network, comprising eight of the sixteen routes with an operational fleet of 242 buses.

### 2.2.3 BRT Infrastructure Development

Design for Medan BRT will have similar features as the Bandung BRT.

### 2.2.4 Stations

- To support passenger demand, 31 locations have been calculated as the optimum number of stations required.
- The stations have been positioned according to an appreciation of passenger demand and relate to onward journey opportunities (accessibility).
- Stations will follow a median based configuration, whereby the station structure is located within the centre of the highway, and BRT busway and adjacent general traffic

lanes are off set, on either and at predefined dimensions, from the structure. 8 stations in the CBD area will be on one-way streets also located in the middle of the road.

- Stations will be low floor to be on level with low floor buses (35cm height)
- The doors position will be positioned to support 9m, 12m and 18m articulated buses

### 2.2.5 Terminals

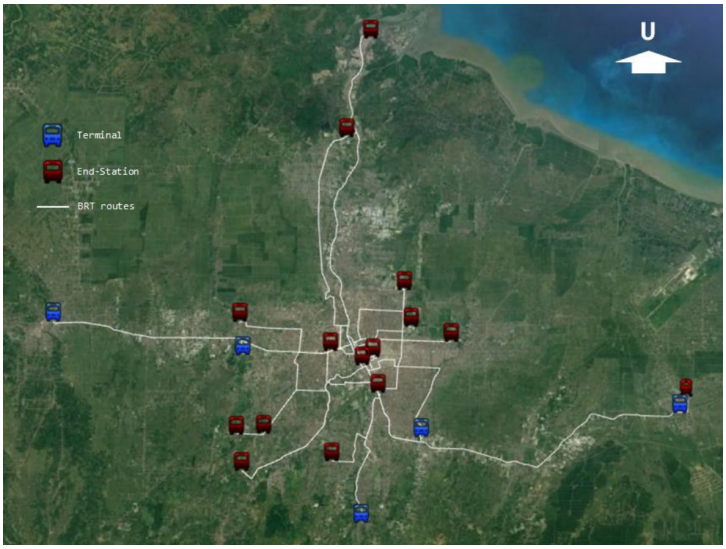



*Figure 9: Mebidang Terminals*

The Mebidang BRT is planned to operate with three types of terminals and layover points:

- At the existing bus terminal
- At BRT end-station within BRT corridor
- At the off-corridor BRT end-station

There are 19 route terminus identifies for the new BRT system. Four terminals, 1 railway stations and 14 end-stations; One terminal (Lubuk Pakam) is utilized by the new BRT system for overnight parking or temporary layover spaces if no land is available at Lubuk Pakam Station for bus layover activities; Thirteen locations of end-stations should be designed to accommodate layover activities. Three locations (Titi Pahlawan, Ani Idrus & Ps. Flamboyan) are still being evaluated to determine suitable location for end-station.

The design of terminals needs to consider the design of opportunity charge for e-buses and a parking area for at least 10 buses.

### 2.2.6 Depots

- The analysis of the Project Preparation Consultant indicated the need of 2 depot areas to be located in Pinang Baris and Amplas, supported secure overnight parking at four locations. for a fleet of approximately 500 buses divided in two to four operators. 3.7 ha are required for the first phase of the project a 6.7 ha for all the routes considered in the project.
- Due to the limited depot area available development of multistory depots within the terminals at Amplas and Pinang Baris is required.
- The existing areas in the terminals are not sufficient to accommodate the required fleet size and overnight parking of buses at four remote terminals as shown in Figure 10

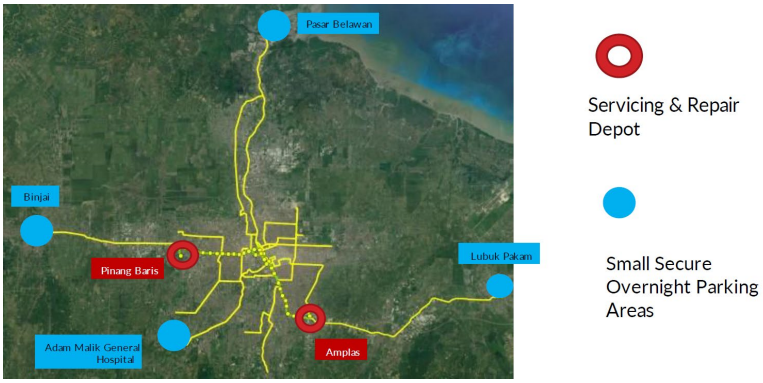



*Figure 10: Mebidang "Top-down" depot strategy*

- The depots will follow design standards for BRT terminals with provision for e-buses charging infrastructure and equipment.
- Depots will be designed for e-buses overnight and off-peak charging infrastructure.
- Design will consider specifications for interoperability of different charging technologies.
- Depot's design will consider all functions required. As diesel buses will operate at the same time as e-buses, the depot will need to be designed for shared infrastructure for both types of technology.

### 2.2.7 Bus stops

The system will have identified bus stops for the stretches of the routes outside the BRT infrastructure. Preliminary estimations indicate a total of approximately 800 stops for all the routes. The stops will be high, medium and low demand stations. High and medium demand stations will be sheltered stations, Low demand stations will be pole indicated stations.

## 3. OBJECTIVES

The Directorate General of Land Transport (DGLT) (**the "Client**"), Ministry of Transport, plans to hire a Project Management Consultant (**the "PMC"**) to assist with the management of the range of activities involved in BRT detailed design, implementation, and successful operationalization of the two BRT projects in BBMA and Mebidang.

The main objectives of the PMC scope of work (**the "Services"**) are:

- Project management support in the delivery of the two Projects
- Provide technical assistance to the DGLT PMU and subnational PIU/BRT management organizations (Medan and Bandung) on service and operations plan, fare collection, angkot engagement and reorganization, BRT operations management and planning, transaction advisory for contracting of BRT operations to a private operator, operations monitoring, financing plan, marketing, and business development.
- Assist in the procurement phases of the project and develop innovative specifications for the proposed systems, rolling stock and integrated fare collection systems
- Support the DGLT PIU with review of Detailed Engineering Design (DED) for proposed BBMA and Mebidang BRT system that will be developed by DED and Supervision Consultant.
- Develop a detailed scope of work for ITS specifications for the BRT system (passenger information system, fare collection, fleet management, traffic signaling system) and assist in procurement and implementation oversight.
- Support the PIU of Medan and Bandung to implement and monitor environmental and social (E&S) risks and impacts mitigation plans including Environmental and Social Management Plans (ESMPs), Land Acquisition and Resettlement Action Plans (LARAP), Stakeholder Engagement Plan (SEP) and other plans prepared following the project's Environmental and Social Management Framework (ESMF) and sub-project based Environmental and Social Impact Assessments (ESIAs).
- Support the DGLT PIU with road safety audit during design development, construction implementation and post construction/ operations phase, and the development of road crash data.
- Support institutional development design and operationalization of the BRT management organization for Medan and Bandung, and assist in developing an efficient and proactive management organization through support with implementation of efficient management processes
- Develop a permanent capacity building program to develop and improve skills for all the needs of the BRT Management Organization and E&S capacities.
- Support the DGLT PMU and sub-national PIU with project monitoring and reporting including based on the MASTRAN results framework and indicators agreed; Support the DGLT PMU/ subnational PIU in the preparation of Progress Reports and Completion Report as per Project requirements.
- Support the management organization in the first 6 months of operations to adjust the services timetable and optimize operations.

## 4. SCOPES OF SERVICES

The PMC is required to provide expertise in the following areas:

- Project Management
- Public transport service planning, operations, intelligent transportation systems and management
- Technical specifications for BRT vehicles and ITS
- Infrastructure design, area traffic control, traffic engineering
- Spatial planning (including TOD) for urban revitalization via public transportation, that might be impacted because of the BRT system
- Institutional development, business planning
- Bus Industry engagement
- Procurement and support in negotiations
- Support in operators service contract elaboration
- Review of project phasing and construction and construction front strategy
- Environmental and social standards
- Capacity development
- Communications and consultation

### 4.1 Project Inception

Upon project inception, the PMC shall review existing documents supplied by the Client with respect to the Project and the Services, including documents from any previous studies performed in relation to the Project. The PMC will be required to:

- Collect plans, design documentation, reports and status update on projects relevant to Indonesian Mass Transit Program (IMTP, or the Program) and the interventions in Bandung and Medan which will form the first stage of roll-out of the program under the MASTRAN project;
- Conduct a series of consultative meetings with key stakeholders at both National and Provincial level, including Kabupaten-level stakeholders in the Bandung Basin and Mebidang metropolitan areas. These meetings are intended to bring together all the key stakeholders and formally inform all stakeholders about the objectives, methodologies and expected outcomes of the program and to make sure everyone understands the program, the first stage projects and their role;
- On the basis of the review and consultation meetings, develop the revised activities, resources and procurement schedules of the program, if required.

The PMC shall prepare an Inception Report, summarizing the scope of the Services, staffing and organization, available information and required data, and initial work schedule for the tasks required.

### 4.2 Project management

Development and implementation of BRT requires careful management across many interrelated disciplines, each with its own critical paths. The DGLT, while leading project management, will require support and advice on project management techniques and tools together with support in actively managing individual work streams, their technical needs and wider consultation/engagement needs.

The Project Management task will cover all activities necessary for the successful completion of the project, performing the following activities and deliverables:

- Review the Strategic masterplan of the project including project components definition (Work Breakdown System , high level Key Performance Indicators (KPIs), and draft Program budget;
- Develop a Master Project Schedule with clear timelines and milestones for the project
- Prepare Annual Plans and Work Programs
- Develop procedures for management and efficiency in the use of resources
- Develop monitoring instruments to ensure satisfactory performance of the work and measure performance against the KPIs
- Prepare a comprehensive Procurement plan for all project components and handle procurement related tasks such as bid management
- Oversee contracts and review reports and contract deliverables associated with the BRT projects
- Develop and help manage a strategy for BRT development and implementation
- Assist in coordination of Government bodies with a role in BRT development and implementation
- Provide an interface between the system funders, Government, consultant teams and decision makers
- Report to the PIU on progress and help to ensure delivery of agreed actions
- Liaise with appointed project consultants to conduct specific tasks
- Provide guidance and direction on all aspects of scheme development/delivery as required by PIU
- Analyze, monitor, and manage project delivery risks, identifying knowledge gaps and deficiencies at the earliest opportunity
- Prepare M&E Reports as per Project Results Framework, mid-term review report and project completion report.

### 4.2.1 Project Master Schedule

A Project Master Schedule is to be prepared by the PMC which shall include individual schedules for each component project of the program. These schedules shall be kept updated throughout the Services.

The Project Master Schedule shall consider at least:

a) All relevant work activities, including those to be carried out by external agencies, including land acquisition and resettlement shall be described.
b) The activities will be represented in a Gant chart, with accompanying implementation manual to explain the schedule and tasks, and periodically updated
c) Present clear timelines and milestones.
d) Cover a period from mobilization of consultants through commissioning the BRT services and completion of warranty/defects liability periods on construction works, equipment and vehicles
e) The Plan shall be used by the PIU to assist in the management of the overall project.
f) The time and activity schedule shall be capable of being collapsible and expandable to provide (as required) an overview of the project and the details of individual tasks. It is suggested that two schedules should be prepared:
    a. Detailed Gantt Chart
    b. Executive Summary Timeline
g) Provide necessary project planning and management software and associated licenses. Sufficient licenses are to be provided to permit the software to be run in the PIU and other related organizations.
h) The software package used for the schedule is to be available and supported in Indonesia by the vendor. This package needs to be the same used by the bus

operators. The adjustment of service timetable will be the responsibility of the operators with approval of the management team.

i) The planning and management software shall be able to clearly identify the critical path(s) of the project

### 4.2.2 Project Risk Register

The PMC shall develop, maintain, and update a risk register for the Services, as applicable and shall provide such risk register to the Client for review and comment.

### 4.2.3 Schedules for Implementing Agencies

The PMC will prepare individual schedules for DLPG, MOT and local government, similar in format to the Master Schedule, covering all their respective activities. These detailed schedules are to be used by the PIU and the respective teams to manage the activities for which they are responsible.

The PIU shall coordinate all schedules and keep communications with all involved persons to speed up decisions and work development.

The schedules need to consider capacity development as part of the tasks with a clear measure of results.

### 4.2.4 Project Monitoring and Progress Reports

The PMC shall monitor and report on progress of the project considering:

a. Monitor the progress of the activities in the schedule, record actual progress and update all schedules on a regular basis, by default every two weeks.
b. Clearly identify all activities which have fallen behind the planned completion dates and the extent of the delays.
c. Indicate actions to mitigate the delays and the impact of delays on the critical path and estimate probable impacts on the budget.
.
d. Maintain a folio with obstacles and facilitators in the development of the project and make propositions on how to transpose obstacles and use facilitators on benefit of the project.
e. Review the time schedule
f. Starting at the end of Month 2, prepare and issue Monthly Progress Reports and Quarterly Progress Reports.
g. Review and finalise in consultation with client and Bank the methodology of the results indicators to be tracked and the frequency with which the data would be collected; produce 6 monthly M&E reports based on results framework.

The contents of the Progress Reports shall:

- Provide an accurate and complete picture of the progress of the works.
- Include an updated activity/time schedule.
- Present delays and actions to mitigate delays
- Present impact of delays to activities on the critical path.

- To the extent possible, give written explanations of any delays, state who is responsible for the delays, if there are any penalties due caused by delays, assess the possibilities of recovery and the possible effect on other activities.
- Assess the probable effect of delays on the overall project completion date.
- Prepare the Mid-Term Review Report at project mid-term and the Project Completion Report at the end of the Project as per the requirements of the World Bank.
- Track and report the progress of the agreed Results Indicators in the Project Results framework as per the frequency and methodology as outlined in the Project Appraisal Document and agreed with DGLT and the Bank.

The Progress Reports shall be distributed to the management of DGLT and MOT, and to other agencies as agreed with DGLT.

### 4.2.5 Project Communications and Follow Up

The PMC will assist PIU staff in:

- Organizing and conducting regular project management meetings with the various project teams within DGLT as well as with those from BBMA and Mebidang. These meetings are to be used to discuss any matters that are impeding the progress of project activities, and to agree on follow up actions to rectify the situation.
- Establishing a process for identifying problems and following up on issues; and
- Establishing and maintaining regular two-way communications with the different implementing agencies and consultants

### 4.2.6 Project Document Control and Management System

The PMC shall develop, implement, maintain and update as necessary, an effective document control and management system to ensure that all Project documents are appropriately numbered, titled, controlled and saved in a logical and systematic manner.

All documents prepared and provided by the Consultant shall be in English.

All documents shall be submitted to the Client in electronic form in PDF format. The original files in editable format shall also be submitted if requested by the Client.

## 4.3 Transport Planning & Coordination

### 4.3.1 Public transport service planning and management

The PMC shall have a deep understanding of bus operations, the regulatory framework and travel demand forecasting techniques. The PMC will:

- Provide the primary interface between the PIU and the Detailed Engineering Design (DED) consultants in matters relating to bus operations
- Review and provide feedback on bus operations issues raised in documentation, presentations and other outputs generated by the earlier Medan and Bandung service plans developed.
- Develop a bus operations plan following a review of the earlier analysis and studies conducted (including vehicle specifications, running time, frequency, peak vehicle

requirement, service characteristics, fare systems, etc.), including integration of trunk and feeder routes for the BRT system Review the passenger demand forecasts and available analysis to update the deployment of BRT route services

- Develop an updated financial model (and provide inputs to the downstream PPP transaction for hiring a private operator for the BRT) for the development of a business plan for each BRT Management Entity that will reflect the proposed operations, expected demand, and institutional and contracting arrangements, and subsidy requirements.
- Prepare briefing notes on issues relating to bus operations to bring the DGLT/PIU team up-to-speed on the issues, (state-of-the-art, best practices, opinions, merits/demerits, risk, and implications) to ensure that the DGLT/PIU team is well informed on the subject; and ensure proper consultations with national and sub-national stakeholders in finalization of the BRT operations plan
- Seek, acquire, and transfer relevant knowledge and best practices in urban bus and BRT operations to stakeholders in Medan and Bandung.
- Review progress on the bus operations aspects and assist in capacity building of responsible units, with regard to operationalizing the required management and the support systems
- Assist PIU in monitoring BRT service standards, route service contracts, fare systems and performance monitoring

### 4.3.2 BRT Operations Planning and Service Development

Under this task, the PMC is to:

a) review available information on travel demand, current public transport services, and the proposed operations and service plans; develop specific options and facilitate decision-making on the desired options; and update the operations and service plans and financial models based on decisions taken; Because time has passed since the Feasibility Study was prepared, some assumptions may need to be revised and project plans adjusted accordingly--in particular, the review should consider the current status, considering the Covid19 impact and new sanitary requirements in the operation of transit services.

b) develop detailed operational plans for the BRT services and the related feeder bus/angkot network, as well as detailed proposals/options for adjustments to the existing services in the corridor as the BRT service is introduced.

c) Develop and implement procedures to update/refine BRT operations plans. The service plans need to be periodically reviewed to improve productivity and quality of services. The operations plans are to include service standards, vehicle types/specifications, service frequencies, detailed run times, and station dwell times

d) Provide advice on appropriate commercial activities and non-farebox revenue opportunities (eg. Advertisements in vehicles, stations and terminals, shops and kiosks, real estate development, etc) in and around the BRT system.

The PMC will need to develop and evaluate options for operating plans and assess their implications for vehicle and station design and specification. The PMC will need to develop detailed service plans for each proposed option, as a basis for assisting in the development of the business model and bidding documents and PIU/DGLT in their discussion/negotiation with the potential bidders for the bus operators concessions, and for refining/updating the bus fleet and depot requirements, and the physical design of stations and terminals. The PMC will

liaise with the Detailed Engineering Design (DED) consultants to ensure that these recommendations are incorporated in the DED.

### 4.3.3 Bus Fleet

It is intended that a combination of diesel and electric buses will be used for the BRT services in both BBMA and Mebidang. The Consultant shall review the work performed under the World Bank e-mobility study, and the Project Preparation Consultant (PC) to prepare firm recommendations for the routes to be operated by electric buses, depots to be used by the electric buses and the size of diesel and electric bus fleets. The PMC shall prepare functional requirements and detailed technical specifications for the BRT vehicles, and as needed, the minimum vehicle warranties, tools and diagnostic equipment, vehicle spare parts, driver training and post warranty maintenance that should be procured under the bus operator concessions. The specifications should be broad enough to enable a wide choice of suppliers and promote competition. The PMC should also identify alternative suppliers of such equipment for the convenient reference of the interested bidders for the bus operator concessions.

The PMC will review the recommendations for vehicle sizes prepared by the PC and develop clear functional requirements for bus performance, with the minimum extent of technical specifications required to ensure these functional requirements are met, and satisfy government regulations with respect to passenger and road safety, occupational health, accessibility for persons with disabilities, and local and global emissions. The functional requirements should focus on:

- Passenger comfort and ease of use, including seating and total capacity, ease of entry and exit, suitability for elderly passengers and passengers with young children, temperature and protection from the rain and noise levels
- Specific requirements for persons with disabilities, including visual, hearing, intellectual as well as those with mobility impairments (See World Bank Bus Rapid Transit Accessibility Guidelines). The vehicles and stations should be fully accessible to all persons with disabilities, as well as other passengers, with special needs including parents with prams, small children, and the elderly
- Operational efficiency, including boarding and alighting speeds, dwell time at stops, commercial speeds, acceleration/deceleration rates, fuel consumption, and ease of driving
- Ease and efficiency of maintenance including cost and availability of spare parts iand required skill of maintenance personnel, and cleaning costs
- Good track record of operation in developing city context
- Availability of proposed fuel in the case of diesel engines
- Energy charging alternatives as related to bus km of operations per day and battery autonomy
- Special items related to new sanitation requirements after Covid19
- Emission levels – both local and global
- Safety and security

To the extent possible, these specifications should reflect current international good practice, and the vehicles available in the international rather than just the local market.

It is anticipated that the technical specifications should include the following components:

- Weights and Dimensions: (a) axle loads; (b) vehicle width; (c) vehicle length; (d) wheel-to-body dimensions; (e) floor height; and (f) floor-to-ceiling dimension.

- Body: (a) structure; (b) materials and corrosion resistance; (c) body shape; (d) exterior finish and livery; (e) doorways; (f) windows; (g) exterior panels; (h) wing mirrors; and (i) exterior access points.
- Interior: (a) interior décor; (b) grab rails and straps; (c) passenger seats; (d) special needs seating; (e) driver 's compartment; (f) floor; (g) partition walls; (h) fire and safety equipment; and (i) interior insulation.
- Mechanical: (a) engine; (b) exhaust system; (c) engine cooling system; (d) fuel system; (e) environmental and safety standards; (f) transmission; (g) drive shaft, (h) axles; (i) suspension system; (j) steering; (k) brakes; (l) tires and wheels; (m) turning radii; (n) air conditioning system; (o) maintenance and servicing; (p) tools, software, and diagnostic equipment; and (q) performance documentation.
- Electrical: (a) interior lighting; (b) external lighting; (c) battery and battery compartment; and (d) wiring and cabling.
- Intelligent Transportation Systems (ITS): (a) vehicle performance monitoring (telemetry); (b) vehicle weight indicator; (c) external variable messaging display; (d) interior variable messaging display; (e) interior infotainment display; (f) audio system; (g) door opening and synchronization unit; (h) driver displays and on- board CCTV cameras; (i) driver panic alarm; (j) description of components to be fitted and installed, such as Vehicle Logic Unit, Automatic Vehicle Location System, Communications Unit, Traffic Signal Priority System, Driver Data Terminal, and Digital Video Recorder; and (k) if appropriate, on board automatic fare collection devices.

As an input to the bus operator concession agreements, the PMC will develop a step-by-step description of the vehicle approval process that will be included in the bus operator concession agreements, which should include the following elements:

- Sign-off process of conceptual vehicle design with manufacturer
- Sign-off process of the detailed vehicle design with manufacturer
- Optional site visits to manufacturing plant
- Authority given for full production of units
- Inspection of initially produced units and inspection of all delivered units
- Vehicle homologation and licensing
- Sign-off of vehicle delivery.

The PMC will specify all vehicle testing for electrical vehicles before they are approved for operations. The tests shall include at a minimum:

- Charging time for batteries (slow and fast charging)
- Energy consumption
- Autonomy range in km with battery specification for recharging
- Behavior on road higher grades in the itinerary of the routes
- Weight of vehicles with full occupation and verification with maximum load in the regulations.

### 4.3.4 Fare Policy

The PMC will prepare options and a detailed proposal for consideration of PIU/DGLT regarding fare policy, system design, structure and levels; and facilitate a policy decision on a desired option. In accomplishing this task, the PMC will:

- Measure and analyze current fare levels of existing public transport services;
- Develop options for fare products, such as discounted fares for multi-trip purchases, off-peak travel, children under 100 cm in height, etc.;

- Develop recommendations on the fare structure and fare levels (pure distance-based fare, distance based fare with minimum and maximum values, fare integration, inclusion of feeder services as part of the system, fare levels, time windows for transfers and so on);
- Analyze the impact of fare levels on demand;
- Conduct workshops with stakeholders regarding the different options for fare collection equipment and technologies and the fare structure, including flat fares and distance-based fares, for both the trunk and feeder services;
- Recommend fare collection equipment and systems that will achieve the desired functions at reasonable cost;
- Detail the fare rules and protocols that will be required to assist in specifying the fare system technology; and
- Modify fare structure and fare levels based on iterative feedback from the financial modelling work.
- Investigate and recommend how the fare system should be operate and managed, including whether O&M of the fare system should be contracted out to a private operator.
- Options for fare handling and clearing house functions for disbursement of fare revenue to operators shall be investigated and recommendations made, including (if private operation is recommended) whether fare collection and clearing house should be separate contracts or combined into a single contract.

The outputs from this activity will serve as inputs to detailed engineering design and to the system manager which will be responsible for operationalizing the fare collection system.

### 4.3.5 Financial Modeling

An updated financial model will need to be prepared to reflect the updated operations plan, revised demand projections, current and expected costs, and proposed institutional and contracting arrangements. The financial model will help to advise and guide policy and management decisions for the BBMA and Mebidang BRT system.

The PMC will develop a financial model to simulate the investment operational costs and revenues of the proposed system. The financial model will serve as an input to the business model to be prepared for the PPP transaction.

The PMC will reference BRT cost benchmarks from other similar projects, consult stakeholders and conduct meetings with knowledgeable parties, as needed, to define the key input costs to the system, including:

- Costs associated with institutional oversight and management of the system;
- Costs associated with Vehicle Operator contracts (labor costs, fuel costs, electric energy costs, vehicle maintenance costs, depot operation costs, etc.);
- Costs associated with fare collection and clearinghouse systems (maintenance of hardware/software, labor costs);
- Costs associated with control center management (maintenance of hardware/software, labor costs);
- Costs associated with station services and maintenance (labor costs of fare collection, security, cash collection, station cleaning, trash collection / recycling, landscaping maintenance, equipment, and uniform costs); and
- Costs associated with infrastructure maintenance (busways, stations, depots).
- Calculate the full operational costs and revenues for each scenario (on a bus-km basis) including the necessary technical tariff and customer tariff levels to ensure

system financial sustainability and produce a summary report of each set of scenarios run through the financial model and the likely deficit financing requirement from the local government; and
- Produce a summary report on the definition of key parameters into the financial model.

The PMC will conduct workshops with main stakeholders on the operational and financial scenarios to develop understanding and consensus on the proposed institutional, technical, and financial arrangements, and:

- Facilitate understanding, analysis and timely decision-making through the financial modeling process.
- Produce a study on system financing sources other than fare

## 4.4 Design Support

### 4.4.1 Infrastructure Design Review

The PMC will be required to give expert advice on BRT infrastructure needs throughout the detailed design and construction stages, and to work closely with the DED consultants on refinements to the systems plan, including urban realm enhancements.

There will be a need throughout the development and implementation of BRT to examine specific infrastructure issues. This might range from the appropriate selection of materials to design detail that optimizes passenger-infrastructure interface and includes traffic signals and wider ITS systems.

The PMC shall review the designs and specifications prepared by the DED consultants and in a DED Review Report, highlight any deviations to requirements by law, local standards and guidelines as well as international good design practice. The PMC shall consider hazards, risks and advice measures to reduce or avoid risks at the source.

On issues related to infrastructure design, the PMC will coordinate with the DED consultant and examine and give advice on issues including but not limited to:

- appropriate selection of materials
- civil and structural design detailing
- special attention to Major Stations design through possible competitive Design Competitions processes
- optimization of passenger-infrastructure interface
- urban integration, equitable access
- traffic signaling and optimization
- optimizing the operational requirements of BRT and wider ITS systems
- covid informed designs including adequate ventilation
- universal access
- adequacy of ROW to accommodate the traffic in near and medium term
- sustainability and decarbonization
- climate adaptation and resilience
- reliability, maintainability, and safety
- crime prevention through environmental design (CPTED)

Where required by the Client, the PMC shall prepare papers, technical memoranda or presentations with analysis and recommendations on the above issues.

### 4.4.2 Environmental and Social Safeguards Review

The PMC will be required to give expert advice on compliance with Environmental and Social Safeguards throughout the detailed design and construction stages, and to work closely with the DED consultants in this regard.

During the DED stage the PMC shall provide a comprehensive review of compliance with environmental and social safeguards and prepare a DED Environmental and Social Safeguard Compliance Report that highlights any aspects of the design and bidding documents that requires revision.

### 4.4.3 Traffic Management and Parking Management

On issues related to traffic management, the PMC will:

- Provide the primary interface between the PIU team and task specific consultants in matters relating to Traffic Management, Area Traffic Control, and Intelligent Transportation Systems;
- Review forms of traffic management and traffic control techniques advocated for the BRT corridor with specific reference to local acceptability and long term sustainability;
- Review and study the parking situation along the BRT corridor and its cross streets, the parking demand and supply and help develop a parking strategy founded on sound demand management principles, and a parking masterplan for the corridor;
- Provide advice on interchange optimization and related measures, some of which will have been developed through feasibility study, and their relevance to achieving preferential run times as well as their relationship to delivering overall transport network efficiencies.
- Review the traffic management plan prepared by the DED Consultant for implementation and prepare a DED Traffic Management Review Report;
- Support the implementation of the traffic management plan;
- Develop a public engagement strategy to ensure an understanding of new traffic management techniques aimed at wide scale acceptance and, if required, behavioral change.
- Coordinate with DED consultant for intersection design and signaling. Intersection design shall consider synchronization of traffic lights and signal bus priority technology.
- Coordinate with DED and Construction contractor to coordinate traffic management during construction with local authorities, with proper information to the population that will be impacted with the measures. This coordination needs to make sure that information is given to the citizens with anticipation and that all related organizations are informed and aware of the measures

### 4.4.4 Road Safety Audits & Crash Data Development

The PMC shall conduct Road Safety Audits and prepare Road Safety Audit reports for the two BRT projects at the following stages:

(i) design stage;
(ii) during construction;
(iii) post construction;

The PMC shall ensure that the gaps identified, and recommendations are duly addressed. Traffic accidents data for the corridor and metropolitan area will need to be collected on a

regular basis and the PMC should assist BBMA and Mebidang/North Sumatra agencies develop necessary systems for traffic accidents database development and regular data collection.

### 4.4.5 Intelligent Transportation Systems (ITS)

Effective operation and management of the BRT system requires use of a number of Intelligent Transport System (ITS) applications and associated equipment. These include:

a) Passenger Information System (PIS) on vehicles and at stations, to provide real time information to passengers on the schedules, time of arrival of buses (for passengers at stations) and next station (for passengers on buses);
b) Fleet Management System (FMS) - also known as Automatic Vehicle Location (AVL) – for real time tracking the position of the BRT vehicles along the route and ensuring schedule adherence;
c) Access control system for the terminals and the depot
d) CCTV monitoring and security systems for buses and stations;
e) BRT Operations Control Centre (OCC) to monitor the FMS, PIS, Electronic Fare Collection System and Security systems and to use the data from them to manage to BRT operations and the passenger flows at stations;
f) Communications network to link the applications, including an optical fibre cable network linking the OCC, Stations, Terminals and Depot, and a Global Positioning System (GPS) or Digital GPS (DGPS) for buses.

The PMC shall be responsible for:

a) Preparation of technical and/or functional specifications for the individual ITS components and their integration into the BRT system.
b) prepare bid and draft contract documents for ITS providers.
c) Provide assistance to the DGLT PMU/PIU during bid evaluation,
d) Supervise delivery, installation, commissioning, and acceptance testing of the ITS equipment contracted, and
e) Contract management for all ITS contracts including preparation of supervision reports as required.

The broad scope of work of the PMC would be to develop designs and functional specs for the ITS systems to be implemented (automatic fare collection system, passenger information system, fleet management system, operations control centre, etc.). The PMC shall discuss the functional requirements with DGLT PMU/PIU staff and prepare a Technical Memorandum which is to be agreed by the DGLT before preparing substantive inputs to the task of preparing technical specifications for the bidding documents. Following agreement from DGLT to the PMC shall develop functional specifications and technical specifications as necessary.

The PMC shall develop the procurement strategy for the main subsystems and contractual structures, assist with procurement of vendors for the implementation of the system(s), implementation oversight, quality check and invoicing, and testing and commissioning.

The PMC shall ensure the DED Consultant is kept fully informed of the infrastructure requirements required to achieve full functionality of the ITS including but not necessarily limited to the civil works infrastructure, facilities for mounting and installation of ITS equipment, provision of ducting, communications systems, power supply and security requirements for the ITS components and all elements of the Operations Control Centre (furniture, facilities for mounting and installation of wall displays, servers, ducting, communications systems, lighting,

power supply, climatization and security requirements etc) so that the DED Consultant can make the required provisions in the Works Design.

The scope of work excludes traffic signals and area traffic control system which shall be the responsibility of the DED Consultant. The PMC shall coordinate with the DGLT PMU, PIU, and DED Consultant to develop recommendations on whether the Traffic Control Centre (and ATCS in-station equipment) should be combined with the BRT Operations Control Centre.

### 4.4.6 Automatic Fare Collection System and Ticketing System

The PMC shall prepare technical and functional specifications as appropriate for the fare collection and ticketing equipment. The proposed system be modern, based on smart-cards and phone-based systems, consisting of card sales and distribution, ticket vending and reloading facilities, validation devices, and back-office support systems for revenue clearing and management.

Bidding and draft contract documents shall be prepared, making sure the bidders will be required to offer open protocols and mapping as a key requirement.

The PMC shall be responsible for:

a) Preparation of technical and/or functional specifications for all fare collection and ticketing system components and their integration into the BRT system.
b) prepare bid and draft contract documents for fare collection and ticketing providers.
c) Provide assistance to the DGLT PMU/PIU during bid evaluation,
d) Supervise delivery, installation, commissioning and acceptance testing of the fare collection and ticketing equipment contracted, and
e) Contract management for all fare collection and ticketing contracts including preparation of supervision reports as required.

PMC will coordinate with the DED consultant to guarantee that design will consider the requirements from specifications as related to:

- Civil works infrastructure;
- Facilities for installation of turnstiles at stations and terminals and for user information systems (information panels, totems, etc)
- Energy requirements;
- Cards selling and recharging requirements;
- Communications requirements;
- Security requirements.

### 4.4.7 Fleet Management System

The PMC shall be responsible for:

a) Preparation of technical and/or functional specifications for the fleet management system and its integration into the BRT system.
b) Prepare bid and draft contract documents for the Fleet Management System.
c) Provide assistance to the DGLT PMU/PIU during bid evaluation,
d) Supervise delivery, installation, commissioning and acceptance testing of the Fleet Management System, and
e) Contract management for the Fleet Management System including preparation of supervision reports as required.

PMC will coordinate with the DED consultant to include in design:

- Physical space for the Operations Control Center;
- Communications requirements provision in civil works design;
- Energy requirements for the Control Center (safe line and power break);
- Control Center room climatization.

### 4.4.8 Passenger Information and Security System

The PMC shall be responsible for:

a) Preparation of technical and/or functional specifications for the Passenger Information and Security system and its integration into the BRT system.
b) prepare bid and draft contract documents for the Passenger Information and Security System.
c) Provide assistance to the DGLT PMU/PIU during bid evaluation,
d) Supervise delivery, installation, commissioning and acceptance testing of the Passenger Information and Security System, and
e) Contract management for the Passenger Information and Security System including preparation of supervision reports as required.

PMC will coordinate with the DED consultant the requirements for:

- Design of passenger information hardware infrastructure at stations and terminals;
- Design of passenger information orientation signs;
- Location and connections for CCTV cameras at stations and terminals;
- Civil works for communications requirements.

### 4.4.9 Traffic Signaling & Enforcement

Based on the studies for traffic management, intersection optimization, and BRT service optimization, the consultant shall ensure that these traffic signaling systems and necessary enforcement systems are put in place through the DED consultants and the vendors/ contractors managed by them. Procurement

## 4.5 Procurement

With regards to procurement, the PMC will:

a. At the start of the assignment, update, and detail (as required) the Master Procurement Plan in the Project Implementation Plan (PIP).
b. From Master Procurement Plan, prepare detailed Procurement Plans for DGLT and other local implementing agency equivalents.
c. Monitor progress of all procurement activities, record progress and update all procurement plans as required on a regular basis, by default every two months.

The PMC is to support DGLT and other implementing agencies of Medan and Bandung in the procurement of consulting services in regard to ITS PMC, and extend oversight on the procurements to be managed by the DED consultant, ITS PMC. They will also provide transaction advisory support for hiring private contractors for the BRT system operations and

maintenance including fleet as designed. In particular, the PMC is responsible for:

a. Provide legal counsel in the form of the standard contracts for procurement of equipment and bus service operators, as well as the contracts to be used for the procurement of consulting services in accordance with the Loan Agreement and available Standard Bidding Documents.
b. Provide legal advice on preparation of the individual contracts for procurement of consultants, works, equipment and bus service operators.
c. Prepare commercial sections of all contracts for services and equipment, for construction of infrastructure.
d. Prepare the bidding documents and contracts for the bus fleet (if applicable) and bus operators and (if applicable) system managers and prepare a technical report on completion of the Bus Operator Procurement.
e. Prepare bidding documents and contracts for ITS, fare collection and fleet management services and prepare a technical report on completion of the procurement.
f. Prepare bidding documents and contracts for any out-sourced functions such as station maintenance, security services etc
g. Closely work with and advise each Technical Working Group on their selection process.
h. Assist in the final selection, contract negotiations through to signing of all contracts.
i. Monitor the production, delivery, installation, and commissioning of equipment/civil works and prepare supervision reports as required.

### 4.6 Contract Management and Cost Control

This task is to assist DGLT/PIU in the overall budgeting and cost control of the project, and in managing the project contracts, especially in relation to payment disbursements and claims handling. The objective is to provide DGLT/PIU, as well as its local implementing agency equivalents, with a clear and correct picture of the accrued costs and the updated total estimated costs of the project at any time.

The PMC shall set up a contract management system including procedures which fulfill the requirements of each contract in terms of the following items, and any other relevant procedures. The objective is to ensure that the contracts are managed properly, and that DGLT/PIU shall always have a full overview of any open issues, such as:

- contract meetings
- site meetings
- minutes of meetings
- correspondence
- payment disbursements
- penalties due, claimed or paid/deducted, and
- claims handling

### 4.7 Assistance during the Defect Liability Period

During the Defect Liability Period, the PMC shall assist DGLT/PIU in checking that all contractors (suppliers of services and equipment, and all outsourced operators for bus operations under contract, such as bus operators, system manager, fare collection provider, etc.) fulfill their contractual obligations to carry out necessary and corrective actions for any

matter concerning functioning equipment and proper BRT/bus operations as per operational and business model design.
For any serious failure, the PMC shall prepare a report for the DGLT/PIU to explain the circumstances of the failure, the responsibilities of the contractor, and the corrective action to be carried out.

## 4.8 Institutional development, business planning and industry engagement

### 4.8.1 General Requirements

The Medan/Bandung Bus Rapid Transit (BRT) Systems are expected to be managed by a dedicated BRT Management Entity (BRTME). Because the BRT system is planned to extend beyond the city boundaries of Medan and Bandung, institutional arrangements for creation of a public transport entity should envision participation of local government units covering the Greater Medan and Greater Bandung areas, it is expected that the PIU will be the seed for these organizations.

DGLT will be responsible for ensuring that bus operators are procured, who will be managed on a day-to-day basis by the BRTME, both on the street and in terms of the respective contracts with the operators.

All system revenue will accrue to a BRT Fund, who will pay the BRTME and directly pay the operating contractors for services provided which meets standards.

All transportation, customer-facing and support services will be performed by the private sector under contract.

The BRTME will be responsible to manage the contractors through performance agreements. Bus services will be provided by private sector operator(s) who will acquire, finance, operate and maintain their own buses. Bus operators will be paid on the basis of bus-kilometer and achievement of key performance indicators. All other support and maintenance services will be provided by private sector suppliers in accordance with the bus operator concession contract.

The PMC will work closely with the PIU/DGLT and local government to prepare and bid out the BRTME contract and the service contracts for BRT bus services. In particular, the PMC will recommend the nature, objectives, deliverables and functions of the BRTME and BRT bus operators, and review and provide specific comments on the draft terms of reference and contracts of the BRTME and bus operator service contracts. The PMC will also work closely with a separate consultant team under the PIU/DGLT to engage with transport industry stakeholders, gain their trust, and, if desired by the industry stakeholders, enable them to organize themselves and participate in the bidding for bus service contracts.

The PMC will undertake, among other things, the following tasks:

- Provide the primary interface between the PIU and the individual specialized consultants;
- Review and provide feedback on institutional and regulatory issues raised in documentation, presentations and other outputs generated;
- Review the proposed institutional approach, with regard to the political, legal, organizational and financing feasibility, and how it could be integrated within the current framework;
- Support DGLT in creating a public entity that will serve as the system owner/authority through (a) the preparation of a feasibility study/business and financial plan for the system owner/authority as required for the creation of a new public sector entity; (b) support in processing the required approvals for establishing the public sector entity; and (c) planning and executing a capacity building program for the public sector entity;

- Engage in discussions with all concerned agencies and departments to ensure a smooth transition
- Specify the nature, functions and structure of the BRTME and the mechanisms through which it would perform and/or outsource the activities required for a sustainable BRT system;
- Review and assist in implementing the proposed arrangements for impacted Angkots, both on the regulatory/franchise aspects and on the transition arrangements to enable the affected operators to participate in the bidding for service contracts;
- Prepare briefing notes on issues relating to institutional and regulatory matters to bring the PIU team up-to-speed on the issues, (state-of-the-art, best practice, opinions, merits/demerits, risk and Implications) to ensure that the PIU team is better informed on specialized subjects.

### 4.8.2 Engagement and Capacity Building of Existing Operators

It is proposed that existing angkot operators on the BRT corridor be given the option to provide BRT trunk or feeder services, enabling them to transition from being franchise holders on the route to shareholders in an entity that would operate BRT bus services on the same route. Those operators who favor this option would be assisted in forming a legal entity with eligibility to bid for the service contract, possibly using their existing vehicle as their contribution to the new entity. There would also be an option for operators to exit the industry or possibly to convert their angkot franchise to another form of franchise (taxi, shuttle, AUV, etc.). A vehicle disposal program would also be developed to enable operators to derive compensation for retiring their old angkots. The PMC would be responsible for preparing the proposed business model options for the existing operators and their integration into the BRT. Operators who succeed in winning service contracts would be given technical training to enable them to operate the services to the required standards. This task covers negotiations with operators on the business model for BRT trunk and feeder service delivery or compensation for reducing existing services.

The PMC will participate in discussions with existing operators who currently provide public transport services along or across the proposed corridor (i.e. operators that are either fully or partially affected by the new proposed BRT services, including feeder services). These discussions could also involve additional individuals or firms who express an interest in operating BRT services. Service provision is recommended to be delivered by more than one company or association, to reduce inherent risks with sole service provision. New models are being used as models of fleet ownership and the PMC consultant will investigate these new models in the analysis of the number of operators and investors.

The full range of discussions is expected to take place over a 12–16-month period, ranging from initial confidence-building discussions to contract bidding and award. The PMC will engage with a separate consultant team under the PIU tasked to engage with transport industry stakeholders, gain their trust, and, if desired by the industry stakeholders, enable them to organize themselves and participate in the bidding for bus service contracts. The PMC will also be required to coordinate with staff of the public sector agencies that may be interacting or liaising with transport industry workers, operators, or their representatives.

### 4.8.3 Financial Assessment of Existing and Proposed Transport Services on the Corridor

The PMC will also model the financial performance of the existing transport operators on the corridor. This analysis is fundamental to understanding the current profitability of existing operators—and what the BRT system should offer for the existing operators to consider participation in the BRT service contracts as an attractive alternative.

The PMC will therefore need to develop a Cost Model of the existing services by mode as well as for the BRT bus services under service contract. Among the cost components to be included in this analysis are:

- Vehicle depreciation
- Insurance costs
- License fees
- Association fees
- Vehicle renting prices
- Office costs
- Fuel costs
- Employee costs
- Repair costs
- Maintenance costs
- Taxes

The PMC will also estimate the revenues from the existing services, including fare revenues, advertising revenues, and any other service-related revenues. The modelling exercise should enable us to understand the current net income of existing operators as well as the profitability of the BRT bus services assuming different levels of price per bus km availability payments.

### 4.8.4 Training for BRT Bus Operators

The extent of knowledge of existing operators about modern business and management practices required for operation of BRT bus services was not assessed. However, it has been assumed that some training of operators to provide these skills would be required.

The PMC shall undertake a business skills assessment of the operators likely to provide the BRT services, identify the skills needed to deliver the services, including operations planning, crew and vehicle scheduling, maintenance management, driver and mechanic recruitment and training, fare collection and financial management, and determine the crucial gaps in skills and knowledge that will need to be bridged.

### 4.8.5 Old Vehicle Disposal Program

The PMC will study options for dealing with the old vehicles of transport operators affected by the BRT project and design a program for processing the disposal of old vehicles, including procedures, resources and institutional arrangements including advising on incorporating disposal of old vehicles into the PPP tender process. The proposed program for disposal of old vehicles through scraping shall include have strict control procedures.

## 4.9 PPP Transaction Advisory

The capital investment in the required infrastructure will be financed publicly (through the World Bank and AFD loans and GoI). The DGLT, however envisages that the BRT system could be operated and maintained by private sector entities under the PPP modality. The main objective of the Transaction Advisory Services task is to define and implement the optimal management, operational, financial and maintenance arrangements for the BRT system. This will require assessment of the various PPP options for managing, operating, and maintaining the BRT and feeder system, and possibly investing in rolling-stock and supporting systems of the BRT/feeders, to recommend a preferred business model (using a robust options appraisal model), and to outline the main legal, regulatory, financial, and cost and risk sharing aspects of that preferred model, seek market input on the model and prepare an outline structure. Following agreement from DGLT on the proposed structure the PMC shall

prepare bid / tender documents and provide advisory support to the DGLT during the bidding process until financial close.

To meet these objectives the PMC will be required to undertake:

- Due Diligence Studies
- Development of Project Delivery Options
- Management of the Bidding Process
- Assistance Until Financial Close
- Other Tasks/Responsibilities

The specific requirements for the above listed tasks are described in section H to L of Part 2 that follow.

### 4.9.1 Due Diligence Studies

The PMC will review and refine where necessary all inputs, including cost estimates, prepared under the Preliminary Engineering Design and Detailed Engineering. The PMC shall be required to undertake any, and all, additional work and surveys required to provide complete, accurate and robust information at the level of detail required for use in the bidding and contracting process.

The work performed under this task shall be comprehensively documented in a Due Diligence Studies report composed of validation of ridership, MPSS, legal and institutional analysis.

**Validation of ridership projections**

Under earlier activities the PMC will have reviewed and updated the ridership demand projections and used such information to update the operational and service plan. This work will not be repeated under the Transaction Advisory Services, but the PMC shall perform any and all work required to obtain any additional information required for the financial modelling and/or bidding process related to demand (e.g., annual, daily-, peak period-, peak hour-ridership figures), performance (e.g., speed, travel time, reliability, safety), and any other parameters needed for the analysis.

The PMC shall also identify and forecast the impact of new projects/developments with possible interface with the BRT System that may be implemented within the period of the BRT concession.

**Technical Due Diligence and Minimum Performance Specifications and Standards (MPSS)**

Taking into account the technical and functional specifications of the BRT, the PMC shall:

i) Review the design of the various infrastructure elements prepared by the PED and DED to ensure compatible, and optimal functionality, with the projected passenger flows and operational characteristics of the system;
ii) Review the preliminary cost estimates in the PED and refine where required to provide an adequate level of detail for initial financial modelling. The PMC shall furthermore engage with the DED on an ongoing basis throughout the services to ensure that the cost estimates produced from the DED work are sufficiently robust to be used not only for infrastructure budgeting purposes but for input into the financial model where appropriate.
iii) Determine the requirements for the Service Contracts and finalize the appropriate MPSS, consistent with global best practices, standards in BRTs;
iv) Develop appropriate Key Performance Indicators (KPIs) based on international experience to help ensure that the Project achieves the level of service required (e.g., minimum headway, hourly peak load, etc.);

v) Conduct informal consultations with potential fleet operators, bus suppliers, labour, equipment suppliers and other relevant parties on the proposed MPSS and the general level of interest in fleet supply, operation and maintenance.

All technical-related deliverables shall be submitted to the DGLT through a formal communication by the PMC.

**Legal and Institutional due diligence**

The PMC review the legal and regulatory framework for the sector and identify the PPP modes permitted within this framework. The PMC shall consider findings and recommendations of any earlier studies and refine the legal and institutional framework for the Project. The PMC shall:

i) Assess current laws, administrative issuances, policies and institutional assessment to ascertain the capacity of Government institution(s) to develop, procure, and implement different PPP options, including DGLT's capacity to manage and monitor implementation of the Project once operational and recommend required changes to improve the governance of the same. This analysis will include an assessment of the Government's capacity to enforce the legal and regulatory framework necessary for PPPs (e.g., enforce bus routes, remove informal operators, etc) and make recommendations for strengthening this capacity as required.
ii) Assist the DGLT to obtain a clear finding from the tax authorities of the GoI with respect to all relevant taxes for the service providers and recommending to the Goi for any special tax treatment required for the successful implementation of the project.
iii) Identify and recommend the approaches to make the Service Contracts attractive to both investors and their lenders/financing institutions;
iv) Formulate the appropriate institutional arrangement for the Service Contract arrangement taking into consideration the roles and responsibilities of all stakeholders, including the Government and private sector. The PMC shall determine the legal requirements for all relevant government agencies and the affected LGUs to enter into an agreement for the implementation of the Service Contracts;

### 4.9.2 Development and selection of Project Delivery Options

The PMC shall perform all analysis required to prepare a PPP Options report that:

i) Reviews international experience with private sector participation in BRT projects;
ii) Proposes an optimal structure for use in the BBMA and Mebidang BRT projects based upon a shortlisting of options, detailed financial modelling of the options and a comprehensive risk analysis; and
iii) Confirms that the proposed structure will result in a bankable project by reporting the feedback received from a market sounding exercise.

**Study on the Experience of other Countries in the Establishment, Operations and Maintenance of Similar BRT Schemes**

The PMC shall review the experience of other countries in the operations and management of similar BRT schemes and provide documentation of positive and negative experiences to allow better appreciation of options. A comparative analysis of bus systems, bus contracting arrangements, institutional and regulatory framework (including issuance of franchise of BRT vehicles) and successful BRT management in other countries and cities, including but not limited to Ahmedabad, Bogota, Cambridge, Curitiba, Mexico City, Jakarta, Johannesburg, Lagos, Santiago de Chile, Seoul.

The PMC is expected to:

i) present the key success factors in the bus operator selection for such BRT systems (cities with successful BRT services where the pre-BRT situation resembles the current social and institutional environment of the road-based public transport sector in Indonesia) and where there was a successful transition process, and
ii) apply those lessons in the design of the bidding process and model contract for the BRT operator services.

**Structuring of the Service Contracts**

*Options Shortlisting*

i) Based upon the review of international experience, due diligence of the legal and institutional framework, and work performed for the Cebu BRT, the PMC shall compile a long-list of potential business/commercial and financing models for delivering the project. This long-list should encompass the full spectrum of possibilities of which components of the project (busways, stations, depot, ITS, fare collection and ticketing, fleet procurement, fleet operations) can be contracted to the private sector.
ii) The analysis shall include consideration not only of the component, but shall consider numerous other aspects including, but not limited to:
    a) Separation of initial investment from ongoing operation (e.g. design-build-finance-operate versus public procurement of the infrastructure, e.g. fare collection system and private sector operation and maintenance). In particular, the PMC shall review the option to have a bus asset owning entity in Indonesia adopting UK's financing structure for buses that are rented to Bus Operating Companies and recommend the applicability of the same for the Project;
    b) Single bus operator versus multiple bus operators;
    c) Performance-based bus operations contracting, e.g., payment to bus operators on the level of service provided (e.g.., vehicle kilometers, number of buses and drivers, etc.) using best practices models such as gross cost, net cost, etc.;
    d) Performance-based fare collection system operations contracting covering a performance, risk, incentive and penalty structures to assure reliable operations;
    e) Participation of existing public transport stakeholders in the future BRT system/services;
    f) Feasibility of establishing an escrow account wherein revenues from the various component activities may be aggregated and distributed according to applicable mechanism;
    g) The analysis shall explicitly address whether the private sector will be exposed to farebox (i.e. revenue) risks.
iii) The PMC shall develop a qualitative multi-criteria analysis methodology to short-list the most appropriate models. The methodology should inter alia consider the following key factors:
    a) Advantages, drawbacks, and risks of the model to the government (affordability, legal issues, liabilities) and potential mitigation measures
    b) Affordability to the users
    c) Level of risks transferred to the private sector
    d) Attractiveness to the private sector (i.e. bankability), financial sustainability and likely availability of private finance
    e) Level of interface and complexity between the component parts of the public transit system
    f) Global/Regional Experience of similar models
    g) Legal and regulatory barriers of the model
    h) Technical points that may impact the scenario and its sustainability (e.g., levels of services: frequency, hours of operations)

i) Readiness and likelihood of success for the different business models proposed in the context of Indonesian regulations and enforcement of such regulations.

iv) The multi-criteria analysis methodology shall be used to develop a short-list of options for more detailed assessment. The methodology and selection of the options short-listing must be clearly and concisely documented in a PPP Options report.

*Financial model*

The PMC shall update and refine the Financial Model developed by the PED so that the model can be used to test key decision parameters for each of the short-listed options including:

- Affordability – size of government contribution/subsidy and/or any contingent liabilities
- Affordability to users regarding the level of tariffs
- Bankability – key financing ratios including ROE and coverage ratios
- Risk Transfer – sensitivity analysis to show how government and/or the private sector is exposed in downside risk scenarios (e.g. lower than forecast patronage and revenue, impact of tariff changes on revenues)

The financial model will help to advise and guide policy and management decisions for the BBMA and Mebidang BRTs. To this end, the PMC, among other things, will:

i) Define the key input costs to the system through review and refinement where necessary of the PED analysis. The review may include consulting stakeholders and conduct workshops/meetings with knowledgeable parties, as needed, in order to define:
    - Costs associated with institutional oversight and management of the system, including if applicable contracts for System Management;
    - Costs associated with Vehicle Operator contracts (labor costs, fuel costs, vehicle maintenance costs, depot operation costs, etc.);
    - Costs associated with fare collection and clearinghouse systems (maintenance of hardware/software, labor costs);
    - Costs associated with control center management (maintenance of hardware/software, labor costs);
    - Costs associated with station services and maintenance (labor costs of fare collection, security, cash collection, station cleaning, trash collection / recycling, landscaping maintenance, equipment and uniform costs); and
    - Costs associated with infrastructure maintenance (busways, stations, depots).

ii) Define revenue based on parameters of ridership and tariffs. The PMC shall develop an elasticity model that reflects the changes in ridership that will be expected in response to changes in tariff. Considering the financial evaluation of fare elasticity, the PMC shall review the proposed tariff structure in the PED, including initial fare. Formulate an appropriate parametric tariff adjustment formula considering the impact of the said adjustment to all stakeholders.

iii) Develop a set of financing parameters based upon the PMCs experience, market intelligence and knowledge of the Philippine financial market. The parameters shall include:
    a) Financing terms for the Government: estimates of key financing terms for the Government including debt, revenues from concession fee or direct users' fares, fiscal impacts of the proposed scenarios
    b) Potential Financing Sources: Public sources (e.g. IFIs, government budget/borrowing) and private sources (e.g. domestic or international commercial banks, private equity, DFIs)

c) Cost of Finance: Underlying cost of finance and estimated credit margins based upon research on relevant benchmark required rates of return, namely applicable weighted average cost of capital, and cost of equity applicable considering the risk of under the proposed terms of the Service Contracts
d) Financing Terms: Estimates of key financing terms/covenants including debt tenors, reserving requirements, and target coverage ratios. This shall be based on research on relevant financing data including bank debt interest rates, gearing ratios, project finance debt service coverage ratio (DSCR) benchmarks, financing fees (commitment fees, arrangement fees, agency fees, etc.);
e) Identification and indicative pricing of risk management instruments: Insurance costs, government guarantees, third-party risk guarantees (e.g. Partial Risk Guarantees) and derivatives (e.g. FX Risk swaps, interest rate risk swaps)
f) Relevant taxes and tax implications.

iv) Define reasonable ranges for each key parameter for use in sensitivity testing.
v) Develop an Excel-based financial model that is user-friendly, built-in accordance with best practices (e.g., FAST compliant), documented and provided along with basic training to the PIU and NPMO. The model shall:
   a) Be structured so that, in addition to supporting the choice of contact structuring can also be used as a shadow bid model.
   b) Be fully flexible and traceable to accommodate sensitivity analysis,
   c) Include clear and concise model integrity checks,
   d) Clearly describe proposed financing structures,
   e) Compute relevant asset/firm valuation metrics including project internal rate of return, equity internal rate of return, project net present value (NPV) and equity NPV, etc.; and
   f) Clearly describe the Project's financial position upon conclusion of project / concession period.
vi) A base case revenue projection shall be defined, following which the PMC shall test the Produce a summary report on the definition of key parameters into the financial model;
vii) Conduct workshops with DGLT, LGUs, and other stakeholders on the operational and financial scenarios in order to develop understanding and consensus on the proposed institutional, technical and financial arrangements;
viii) Facilitate understanding, analysis and timely decision-making through the financial modeling process.
ix) The Consultant will use the Financial Model of each of the shortlisted options to make recommendations to DGLT on a Preferred Option.

*Selection of the preferred option*

i) The PMC shall evaluate various short-listed models applicable for the Service Contracts using the financial model alongside a qualitative assessment. The qualitative assessment for each of the shortlisted options should expand on the assessment prepared in the preceding Options Shortlisting task on the advantages, drawbacks, and risks for the government. Additional criteria may be considered (e.g., investment obligations, payment mechanism, minimum contract term, government revenue share) with the view of recommending the optimal modality to be followed.
ii) The PMC will assess and recommend the preferred contract structure and provide clear details of the proposed structure for the Service Contracts. The assessment shall, amongst others, consider:
   a) Likely impacts to DGLT, the private investors and other stakeholders;
   b) Licensing, permitting and other legal risks that need to be addressed and allocated for each structure option for the Service Contracts;
   c) Value for money (VfM) analysis, life-cycle cost to the public sector, or equivalent;

d) All legal requirements relating to Service Contracts implementation (compliance with related laws) and tariff setting (legal review to identify legal processes and impediments/ requirements, including review of the relevant jurisprudence, regulatory framework and previous rulings, and suggest appropriate legal strategies/alternatives to be undertaken in the implementation of the Service Contracts);
e) The Public sector's role in the proposed Service Contracts, whether that role corresponds with the Government's legal obligations, and maintains sufficient power to protect Government's interests.

All legal opinions and advice given during the engagement shall be rendered in a formal communication to the DGLT.

*Risk Assessment*

The Consultant is to propose, and perform, a risk assessment process in accordance with a relevant international standard. In this regard the PMC shall:

i) Conduct risk analysis to determine, assess, and allocate risks during whole project life cycle. The risk analysis shall include a risk rating in which risks are assessed for their potential impact on five separate project consequences:
   a. Cost
   b. Schedule
   c. Project/Government Reputation
   d. Project Outcome or Benefit
   e. Safety
ii) Develop a risk register to permit the ongoing management and mitigation of risk through the project life. The Risk Register shall describe each of the potential risks, and their mitigation. The information provided in the Register for each identified risk should include:
   a. Activity
   b. Description of Risk
   c. Consequences of risk eventuating
   d. Impact on the project of the risk
   e. Mitigation measure (s)
   f. Residual risk after mitigation measures
iii) The risk analysis should cover valuation, allocation and provide recommendation for the appropriate mitigating measures, including review of the extent to which the risks can be underwritten by commercial insurance cover and the likely cost of such cover;
iv) Based on the risk analysis, prepare a contingent liability model for DGLT that quantifies the contingent liabilities, how the same shall be managed and the possible funding requirements;
v) The risk analysis and contingent liabilities model shall be incorporated in the financial model/s (as a section on contingent liabilities) to be calculated/updated from time to time;
vi) Following approval from DGLT for the preferred option the PMC shall develop and provide detail of the Service Contracts' structure, identifying, among others:
   a) investment commitments to be required, their nature and management;
   b) investment plan, how, where and when investments will be made; and
   c) type of public sector support required, including terms and conditions.
vii) Based on the proposed transaction structure, propose options for regulation of the services to be provided by the BRT. In principle, all the rules, procedures, and formulas with respect to setting, adjusting, monitoring, and enforcing service standards should be included in the concession agreement.

**Market Sounding**

Following identification of a preferred PPP contract structure it will be necessary to build consensus among key Government stakeholders around the preferred option and to ascertain the interest and willingness of potential private partners to participate in the PPP scheme. The PMC shall conduct a formal market sounding exercise to determine key areas that will need consideration in finalizing the structure of the Service Contracts. The PMC shall, amongst others:

i) Organize a workshop with all relevant Government stakeholders in order to present the findings of the options analysis and the recommended business models, explaining the reasons for the preferred option. By the end of the workshop, general agreement should be reached on the business model to move forward with.
ii) Prepare and issue a market sounding document to relevant stakeholders prior to the conduct of the actual session/s. The Market Sounding document that will include:
    a. An overview and objectives of the BRT project and indicative project preparation timetable;
    b. Financial and commercial structure of preferred option;
    c. Summary of results of the financial model;
    d. Summary of affordability/fiscal analysis;
    e. Country risk analysis of the Philippines;
    f. Risk analysis of the project/preferred option;
    g. Description of the process on how the market sounding activities will be carried out;
    h. An indicative list of questions to be responded to by relevant stakeholders (e.g. financiers (debt and equity providers), contractors, suppliers, operators), to assess investment and finance appetite for the Project
    i. Anticipated requirements from each party; and
    j. the criteria and/or process for One-On-One sessions (when needed);
iii) Conduct a one-day investors' conference in each of Medan and Bandung. The participants shall include representatives of concerned government agencies, financial institutions, prospective private sector entrepreneurs and consulting firms. All logistics of distribution and collection of the results will be conducted by the PMC. The design of the sounding exercise must ensure that the key risks, issues and constraints facing bidders and financiers are identified and ranked (in order of salience) so that clear structuring recommendations can be made for finalization of the PPP contract structure. The PMC will be expected to outline a very clear, robust and concise methodology for this exercise. The Consultant must identify interviewees from each organization who are recognized decision-makers and not junior/low-ranked staff. As such the PMC requires a sound network of industry contacts and this must be demonstrated in the Consultant's proposal.
iv) Prepare a Market Sounding Report summarizing the findings from the exercise and will consist of, but not limited to, the following:
    a. Key issues that need to be considered;
    b. List of companies consulted;
    c. List of questions with answers from the market sounding sessions;
    d. Summary findings and recommendations
v) The PMC will also work closely with the PIU and LGUs to engage with transport industry stakeholders, gain their trust, and, if desired by the industry stakeholders, enable them to organize themselves and participate in the bidding for bus service contracts.
vi) Organize and participate in a workshop with DGLT to review findings of the Market Sounding and Industry Consultations, obtain agreement on the preferred option and

determine key areas that will need consideration in finalizing procurement documents (e.g. BRT Service Contract, etc.).

**Elaboration of the preferred PPP structure**

i) Based on the agreed preferred option, the PMC shall prepare a Term Sheet for the potential PPP transaction(s). The Term Sheet will specify the main legal and commercial principles underpinning the PPP contracts for various components of the BRT system. Key provisions of the PPP contract to be considered in preparing the Term Sheet include (but are not limited to):
   a) the nature, objectives, deliverables and functions of the various contracts;
   b) recommendations on articles regarding risk allocation;
   c) financing of investments and operations;
   d) commitments of the granting authority;
   e) economic (including tariff setting as needed) and technical regulation.

ii) The PMC shall also include recommendations for the Government on procurement methods and next steps for procuring the contract.

iii) The PMC will then organize a legal/commercial workshop with key Government stakeholders to establish buy-in and support for the Term Sheet.

iv) The PMC shall update the financial model to take into account the final PPP structure and any changes to the risk share arrangements based on the market assessment.

v) The PMC shall, for the preferred option, and specify the key elements of terms of reference and contracts of the BRTSM and bus operator service contracts to be developed under task K.2.

**Support to DGLT on securing Ministry of Finance, Bappenas and all other Government Approvals**

Following agreement on the final scope and structure the PMC shall:

i) Prepare all documents required to be submitted, as necessary, to the Ministry of Finance, Ministry of National Development Planning (Bappenas) and other government agencies or bodies, in the required file format and quantities ;

ii) Assist DGLT to address all issues and concerns until the approval is given by the relevant authorities;

iii) When necessary, prepare a Post-Project Approval, highlighting discussions and decisions made leading to the assignment's final scope and structure;

iv) Make any required revisions in the feasibility and financial model, if any, to incorporate official instructions on the final scope and structure.

### 4.9.3 Preparation of bidding documents and management of the Bidding Process

i) The scope of work under management of the bidding process relates to the procurement of all the parties required for the BRT system to be fully operational under the preferred PPP contract structure. This may include but is not limited to:

   a) A BRT System Manager to assist the DGLT with interim management of the BRT system until a management entity has been established and is fully operational;
   b) Service Provider(s) for fleet supply, operation and maintenance covering Trunk, Feeder and/or Direct services as defined in the operational plan;
   c) Service provider for fare collection and ticketing equipment;
   d) Fund Manager to receive funds from the fare collector and pay all service providers on instruction of the DGLT/BRTSM;

e) Service provider(s) for ITS equipment other than fare collection and ticketing;
f) Service providers for associated activities such as station management, security, cleaning etc.

ii) There will be many interfaces between the above entities. It is therefore envisaged that their services will be procured in parallel and following the same or similar methodologies. The PMC should also identify alternative suppliers of equipment for the convenient reference of the interested operators.

iii) The PMC will develop the legal contracts for each of the service providers (i.e. vehicle operators, station services company, fare system company, control centre and ITS company, and account clearinghouse manager). Within the contract documents, the PMC will define a set of incentives that will include both financial rewards and penalties for the contracted party's performance.

**Bid Implementation Plan**

i) The PMC shall prepare a detailed bid implementation plan which provides the timetable, task schedule, and required outputs during the bidding phase. The plan shall include sub-activity timetable, task schedule and outputs for the pre-tender meetings; investment promotion and investors' conference; one-on-one sessions with prospective bidders (and other stakeholders); and management of the virtual data room.

ii) The plan shall also identify parties involved and their respective roles/participation in the whole process.

**Bid Documents**

i) Update and finalize the term sheet outlining the transaction structure, service level parameters, key terms and conditions, among others, to guide the development of a more detailed Service Contracts;

ii) The PMC shall prepare all the necessary documents to undertake a competitive and transparent bidding process. This shall include, but not necessarily be limited to:
   a) Prequalification notices, advertisements and documents
   b) Instructions to Prospective Bidders (ITPB),
   c) Instruction to Bidders (ITB),
   d) Information Memorandum,
   e) Bid Bulletins, and Bid Forms;
   f) Draft contract documents
   g) Schedules to the contracts including:
      - Service and/or equipment specification at either functional/output or technical level of detail as appropriate. These should be broad enough to enable a wide choice of suppliers and promote competition.
      - Plans and drawings
      - Commissioning, operating and maintenance requirements
      - Insurances
      - Fees and penalties payable
      - Conditions precedent
      - Representations and warranties
      - Training and operational support
      - Spare parts
      - Key personnel requirements
      - Emergency management and response plan
      - Environmental safeguards
      - Management systems and reporting requirements

- Intellectual property
- Responsibilities of DGLT / BRSM
- Termination
- Dispute resolution process
- Definitions and interpretation
- Variations

iii) Prepare execution copies of the Service Contracts including printing and binding, signed off by the Legal Specialist, and submit the same to the DGLT through a formal communication, with a written endorsement from the Legal Specialist;

iv) The PMC shall take into account the results of the one-on-one sessions/ consultations with stakeholders, as confirmed by DGLT, in finalizing the Service Contracts. Said Service Contracts must take into account the agreed risk allocation regime, and use best practices to maximize competition and ensure optimal pricing while considering the interests of government, commuters, and the general public.

**One-on-one Sessions**

Lead the conduct one-on-one session/s with stakeholders to discuss key terms and conditions of the Service Contracts. Conclusions drawn from these one-on-one sessions shall be presented to, discussed, and agreed with DGLT. The PMC may be required to conduct follow up market sounding activities, in determining the proper structure for the Project.

**Bid Execution**

i) In this phase the actual bidding process for the different components of the project to be tendered out will take place. The PMC shall provide all required assistance and advisory support to DGLT during the entire bidding process. Services shall include, but not limited to:
   a) preparation of bid bulletins;
   b) conduct of pre-qualification and pre-bid conference/s;
   c) preparation of responses to bidder queries and queries from other concerned parties;
   d) pre-qualification and bid evaluation;
   e) preparation of evaluation reports;
   f) contract revision/s and finalization;
   g) contract award and signing.

ii) The PMC shall be responsible for the following:
   a) preparation or collation of documents and data to be made available in the data room for the prospective bidders;
   b) setting up and management of data room;
   c) preparation of responses to queries by bidders and other concerned parties; and
   d) preparation of minutes of all meetings related to the bidding process.

iii) The PMC will assist the DGLT in negotiations with the preferred bidders and conclusion of deals negotiations with the preferred bidders for the different components of the project. In this regard the PMC shall:
   a) Requesting clarifications on specific technical and/or financial aspects of the bids;
   b) Discussing potential improvements of certain aspects of the bids so as to maximize value for money for the Agency;
   c) Assist DGLT to minimize interface risks by facilitating negotiations between parties bidding for different components of the project e.g. The party responsible for the supply of the bus fleet and the provider on onboard ITS equipment.

### 4.9.4 Assistance Until Financial Close

The PMC shall provide all required assistance and advisory support to DGLT on the following:

- Development of criteria for dispute resolution as a mechanism, which shall include the process and the establishment of a dispute resolution board;
- Preparation of hand-over protocols;
- Preparation of documents to address conditions precedent in the financing agreements;
- Interpretation and appropriate response to any issue that may be raised by the private sector proponent or its lenders;
- Advice on any other agreement or document with the private sector proponent; and,
- Evaluation of changes in the lead contractor and/or consortium members and sub-contractors.

The PMC shall prepare a Transaction Close-out report that concisely summarizes the activities performed during the Transaction Advisory task of the PMC services.

### 4.10 Creation and Strengthening of the Medan and Bandung Management Entity

PIU/DGLT will initially serve as the system owner and public transport agency with responsibility to manage, operate and maintain the Medan/Bandung BRT system and to procure the supply of BRT services from local operators. As soon as a BRT management entity (BRTME) can be put in place, such functions and responsibilities are intended to be transferred to this public sector entity best suited to undertake public transport services. Accordingly, the primary objective of this task is to assist in the establishment of a public transport management agency for Medan and for Bandung, that will be responsible, in due course, for management, operation and maintenance of the BRT system.

The PMC will prepare:

- a clear time-bound action plan leading to the establishment of the management organizations for Bandung and Medan legal and other documentation necessary to establish these organizations;
- a proposal regarding the future organization and structure of the management organization; and
- a capacity building plan for the organizations.

#### 4.10.1 BRTME and Institutional Development Plan

The PMC shall familiarize itself with (i) legal requirements and processes for creating enterprises or commercial entities under national or local government units, including any requirements for business governance, (ii) organizational structures for other authorities in the transport sector in Indonesia, (iii) organizational structures, goals and mission statements of similar organizations in other countries, considered to represent international good practice in the field, and (iv) any other legal requirements pertaining to establishment of such public sector entity.

Based on these reviews, the PMC is to:

- Propose alternative structures (and goals and mission statements as appropriate), with indicative roles and responsibilities of departments/units, and indicative numbers of staff, and business processes to be undertaken, for discussion with key stakeholders.
- Following selection of a preferred structure, refine the goals and mission statement, business processes, the roles and responsibilities of departments/units, the numbers, and potential grades of staff in each department/unit, together with position descriptions, (including qualifications and experience) of the staff in each position.

- Develop a task- and time-based plan for the development of BRTME, starting with the initial hiring of the senior executives and ending with a fully functioning institution. The plan is to include the hiring and training of permanent staff, migration to BRT operating entity, migration from use of consultants/contract staff to use of BRTME staff, development of business processes, and manuals for carrying out the business processes, as detailed below.
- Identify proper offices (in terms of location, space and quality) to be rented for the BRTME, if needed; and procure and install necessary office equipment and furniture and work out all building utilities so that the MO office is fully functional. Consideration should be given to the long-term location and size of the BRTME office, knowing that the BRT system‘s control center will be later on located in the same office/building, in order to ensure a close working relationship. The offices can be located on top of one of the terminals with proper design of the facilities.
- Identify and help recruit permanent staff for the BRTME in the local market using advanced recruitment methods, starting with senior executives.
- Prepare detailed task and time-based proposals for migrating the BRTME to operations and maintenance (O&M) mode. This should include replacement of the initial consultant/contract staff with permanent staff with management, operations and maintenance skills.
- Prepare and deliver training programs for the BRTME staff. The training programs are to be designed to be used on an ongoing basis for new or replacement staff, not just for the training of the initial staff.
- Prepare Business Process Manuals including for BRT Operations, System Maintenance, and other key activities. These manuals should draw on internationally available manuals as a starting point and be tailored for the local conditions in Indonesia. The PMC is to propose a list of manuals considered necessary, and to obtain the agreement of DGLT to the list before proceeding to produce the manuals.

### 4.10.2 Capacity Development

The PMC shall develop a capacity development program including all levels of PIU. Further, the PMC will develop a continuous plan for capacity development of the BRTMEs of Medan and Bandung.

It has the objective of improving individual skills and institutional knowledge and culture.

The capacity development program must be based on “learning by doing” methodology involving technical assistance and participation of the universities. Universities can offer programs where students perform their investigation to improve operations procedures and information systems.

The capacity development plan shall have a duration of at least three years after commencement of operations.

### 4.10.3 Preparation of the Business & Financial Plan for the BRTME

The PMC is responsible for:

- Define the objectives, service provision and operating performance targets for the BRTME, drawing on relevant international and local good practice, with the assumption that the BRT system will be developed beyond the boundaries of Medan and Bandung Cities.
- Set out the program for the management and development of BRT operations over the initial five years of the system, including:

    - Proposals for increasing the number of BRT services and extending routes;
    - Proposals for adjustments to feeder services;
    - Proposals for fares and ticketing;
    - Proposals for bus and equipment purchase; and
    - Proposals for industry restructuring.
- Estimate potential non-fare box revenues, such as:
- Revenues from advertising. Prepare the tender and contract documents for the leasing of advertising on vehicles, inside stations, and outside stations. Conduct negotiations with chosen advertisers through to signing of contracts.
- Revenues from commercial concessions at Stations and Terminals.
- Revenues from any commercial merchandising of the system branding, including clothing, toys, cell phones, etc.
- Potential additional land value generated by BRT implementation and assist in negotiations with local government to capture this value as revenue. This could include activities such as leasing of commercial rights in exchange for infrastructure contributions, and development of government- owned property near the corridor.
- Potential revenue to the BRTME from carbon credits, if any.
- Calculate, over the initial five years of operation of the system, potential concession and non-fare box revenues generated.
- Calculate, over initial five years of system operation, costs of System Management and any contracted operators (e.g., vehicle operations, station services, and fare systems, etc.) and other operating expenditures.
- Determine the financial provisions to be made for equipment replacement, based on assumptions of normal economic life (based on international practice) and estimated cost at time of replacement.
- Based on the Fare System adopted, calculate (over the initial five years of operation of the system) the overall fare revenues and any possible subsidy requirement. Determine the extent of any government subsidy required to meet the financial obligations. Present options for possible adjustments in fares to reduce possible subsidy requirements.
- Estimate the capital investment and operations and maintenance (O&M) provisions to be made.
- Elaborate a financing plan for the project which identifies the overall funding requirements, secures subnational commitments for financing the deficits including allocations between the subnational entities;
- Develop financial projections for the Business Plan (over the initial five years of operation of the system), including salaries, facility leasing costs, utility costs (electricity, water, etc.), administrative costs, and control center costs (facility maintenance, software, hardware, utilities, etc.).
- Support the SNG with administrative processing for budgetary provisioning for the identified funding requirements and inclusion in annual budgets and medium term development plans, as required.

### 4.11 Environmental and Social Standards

The PMC shall identify and outline any environmental and social issues or concerns that will need to be addressed in conjunction with the Services.

The relevant Location, Country regulatory requirements with respect to environmental and social aspects of the Services shall be identified and addressed through the appropriate regulatory approval processes considering that the Project shall be in compliance with the

applicable Laws in Indonesia, the World Bank environmental and social policies (the Safeguard Policies) and the IFC Performance Standards on Environmental and Social Sustainability and related Environmental, Health, and Safety General Guidelines.

The PMC will support the PIUs to

a) Implement all project activities is as per the Bank's E&S requirements as per its ESMF, LARAP and other E&S documents
b) Monitor and evaluate all E&S aspects and compliances vis-à-vis the Environmental and Social Management Framework (ESMF) and LARAPs prepared for the entire project and cities, Stakeholder Engagement Plan (SEP), Labor Management Procedure and Environment and Social Commitment Plan (ESCP), ESIAs/ESMPs and all other E&S instruments prepared for each subproject/TA. Review reports of E&S safeguard activities shall be prepared as required.
c) Conduct E&S Audits and develop necessary reports as per the Environment & Social Commitment Plan
d) Manage the Environmental and Social Impact Assessment (ESIA) consultants, coordinate with design consultants to provide documents and sub-project details (e.g., feasibility reports) to ESIA consultants so as to enable them to prepare and get the ESIAs approved before initiating the bidding process for respective investments and Technical Assistance Activities,
e) Coordinate with experts and various departments/agencies as required,
f) Ensure that E&S aspects are well incorporated into infrastructure planning and design aspects are of all sub-projects,
g) Coordinate to ensure that the E&S requirements are included in the procurement/bid documents as outlined in ESMF,
h) Ensure that GRM is established for the project,
i) Include the indicators to monitor E&S aspects in the M&E framework
j) Support in preparing, updating, managing E&S inputs in project level MIS,
k) Provide overall support to PMU and PIUs to ensure all E&S aspects are internalized in all project activities during all stages.

### 4.12 Communications and Consultation

Implementation of BRT is supported by a communications and consultation strategy and plan that defines the relationship with stakeholders and the involvement of the public. This communications and consultation plan seeks to ensure that all stakeholders are able to have their ideas and issues represented within scheme development and are briefed as to their involvement in implementation and operation, as required. The public are informed as to impacts and benefits in order to both manage the difficult implementation period and understand the benefits accruing from BRT development. The PIU and related agencies will require support from the PMC on implementation of the consultation plan.

The PMC should build project-related communication and marketing skills of local, subnational and national agencies involved in the project and provide a combination of strategic communications, hands on media relations support, government relations and public relations support to raise the awareness of the BRT as well as to ensure the public's endorsement, involvement in the BRT development, and use of the BRT once operational. A communications plan is to be prepared covering the definition phase of the BRT concept and branding, the development and implementation of the project, followed by the initial operations of the BRT system.

The PMC shall help develop the Project Communications Strategy which will identify the key stakeholders including general public, their main interests, define key messages for each target group of stakeholders, the appropriate medium of communication (print, audio, video,

social media and other platforms)which will be used as the basis for the media relations and public relations activities. The work of the PMC will cover the following broad tasks:

- Identify the scope and characteristics of the BRT system;
- Develop communications materials, reference sources and other tools aimed at communicating the benefits of the system to the local community and stakeholders;
- Foster strong relations with both national and local media; and
- Cultivate and maintain strong relationships with local authorities and key decision makers and stakeholders.

Media relations shall involve a proactive approach and outreach to all media. It should include development of a story matrix setting up a news bureau and production of press releases, media briefings, one-on-one interviews, web-site, video,advertorials, feature stories, television reports, and a press tour, as detailed below.

For all the activities listed in sections 4.12.1to 4.12.6 the PMC shall be responsible for all planning, liaison with third parties, scoping activities, preparing TORs and management of the activities. Out of pockets expenses shall be paid by the PMU including cost of advertisements, travel and subsistence costs of GOI officials on study tours and training activities, service providers for the promotional video, service provider for website development and website hosting costs.

### 4.12.1 Story Matrix

The PMC will develop a story matrix for media relations, which will be a combination of identified local news angles for press releases, some adapted international press releases, topics of the quarterly press conference / press briefings, topics of the one-on-one interviews, timing of expert and customer testimonials, social media, speaker opportunities, etc. The PMC will keep a continuous record of all related media news and will update and revise the story matrix periodically.

### 4.12.2 News Bureau

The PMC will set up a news bureau for the PIU to handle all media enquiries related to the program, and a media monitoring and issue alert system to ensure that the PIU is alerted of any developments in the media.

### 4.12.3 Press releases

The PMC will distribute at least 1 press release every 2 months, covering implementation activities as well as product and service announcements. Out of a list of around 25 media (in English, Bahasa) targeted to receive press releases, the PMC will seek to gain a monthly average coverage of around 15-20 clippings/per month (inclusive of print/electronic media and websites).

### 4.12.4 Press Conferences/Media Briefing

The PMC shall organize a minimum of two press conferences/media briefings annually, comprising one formal briefing and one less formal briefing. The other media events can be less formal, done with a smaller group of media, and organized as required at intervals during the design and implementation of the project. The purpose of these briefings is to update the public on progress, and to be in a position to handle any issues that may arise. The following services are to be provided in support of the press conferences:

- Develop a creative event program
- Identify key message for the event

- Identify and negotiate for venue
- Consider possible questions and develop answers
- Identify, invite and follow-up with target media
- Develop press materials
- Provide onsite hospitality, management, and supervision
- Arrange logistics

### 4.12.5 One-on-One Media Interviews

The PMC will set up one-on-one media interviews for local/national executives and spokespersons involved in the project (and their technical consultants as appropriate) with the media to maximize the exposure of BRT. This is an effective means to deliver key messages about BRT services and build-up media relations.

The PMC‘s responsibilities will include the following:

- Identify target media
- Develop media angles and pitch document
- Pitch interviews to the targets
- Attend/support the interviews
- Conduct media follow-ups
- Provide briefing sheets for the interviewee prior to each interview to prepare them to fully leverage each opportunity

### 4.12.6 Advertisement

The PMC will provide advice on and support for advertising on the advantages and benefits of the BRT system. This will include the identification of the selected media; negotiation on rates; the translation, localization and revision of commercial advertising content as well as coordination with related media for distribution of this content. Radio and TV should be targeted as well as print media.

a) Features and Testimonials

   The PMC will plan, develop and place a minimum of one feature story every three months in key media to support the campaign's messages targeted at key stakeholder segments.

b) Television reports

   The PMC will work closely with the TV stations to design and arrange frequent TV programs to enhance awareness of advantages and benefits of BRT system. These programs should be lively and attractive to get the attention of the public.

c) Promotional Video

   The PMC will prepare a short (5-7 minute) promotional video for the BRT for widespread distribution, initially to the media and government, but also to key stakeholders. The video would also be intended for use at meetings with stakeholders, meetings held as part of the public participation program, and for consultations required for environmental and resettlement activities. It should include a simulation animation of the actual system. A version of this video shall have a YouTube version.

d) Study tours

   The PMC will organize study tours for key decision makers for them to see how BRT systems work in other countries. It is proposed that two Study Tours would be organized, one to countries and cities in Asia, and the other to Europe. The following services are to be provided in support of the study tours:

- Help identify, invite and follow-up with target officials;
- Assist in logistics arrangement; (hotel above 3 stars class and accommodation)
- Develop materials and briefing books for participants;
- Organize meetings and site visits and provide onsite management
- Develop detailed itinerary for the study tour; and
- Provide summary materials and follow-up on visit

e) Website and social media (Facebook, Instagram, WhatsApp groups, TikTok, Twitter)

The PMC will design and maintain a website which will be used initially to raise awareness, to provide information on BRT systems in general and on the BRT project, and to provide monitoring and transparency to the project implementation. The website should include information on the following:

- The basic concept of Bus Rapid Transit (BRT) and successful examples of BRT;
- The necessity for development of the BRT system in Medan/Bandung;
- The proposed BRT system, including the implementation schedule, the BRT routes/schedules and fares, proposed hours of operation, etc.;
- Benefits gained from BRT implementation;
- Regular updates on project's status; and
- Contact details.

In the initial stages, the website should also provide a forum between the PIU, other stakeholders and the public to exchange opinions/ideas with different targeted groups, respond to questions and issues raised by the public and build up goodwill towards the BRT system.

The scope will include the use of social media to publicize the BRT. The work will specify the structure to feed the website and make the publications on Instagram, Facebook and other media.

Costs required for advertisement including features and testimonials, television reports, promotional video, study tours, website and social media will be borne through the PMC.

### 4.12.7 Public Relations Activities

The PMC will assist the PIU in designing and carrying out public relations activities to generate public awareness, involvement and enthusiasm and to transform that into sustained political support for the BRT.

These activities may include in the initial implementation phase:

- Contests for BRT naming, logo, slogans, and station design;
- Project Design Commencement event;
- Project Design Completion Event

In the operational phase (beyond the initial contract period), the activities could cover:

- Project Launch / Commissioning Event. (similar activities than for the two events above, but this event will mark the official opening of the first BRT system and should be organized with a greater sense of ceremony);
- BRT Priority Awareness (education programs emphasizing that BRT is running in a dedicated lane which must not be accessed by any other kind of transport);
- Make free rides and promotional tours with students and other identified groups during vehicle testing prior to operations and
- BRT Week

### 4.12.8 System Branding

The successful BRT systems around the world have also benefited from the establishment of a Brand for them covering facilities, equipment, media, passenger information, communications and staff uniforms. The brand not only differentiates the BRT from other public transport modes in terms of quality of service parameters important to customers (journey time, frequency, reliability, comfort, convenience, safety and security) but also provides recognizable visual clues to station locations and identifiers for printed and web based information on service routing and schedules.

Building on the branding in consultation with PIU/DGLT, the PMC will develop a Brand for the BRT System, and then prepare designs for the application of this brand to all aspects of the BRT System and handbooks/design manuals for key elements.

The key elements are:

- Overall Brand – name, logo, key slogan colors, typeface;
- Printed media, including stationary, reports, passenger information;
- Buses and other vehicles;
- Stations, Terminals and Depot;
- Signage;
- Fare Media; and
- Staff uniforms.

## 4.13 Community Involvement and Participation Plan (CAPP)

Basic and essential features of any urban transport project are community awareness, public consultation and participation. Information disclosure and public awareness are essential for informing the public of the proposed works, potential impacts, and future benefits, as well as garnering support and mitigating grievances during this period. The public is to be made fully aware of the intent, design, schedule, impacts, employment opportunities, and overall benefits of the project, with a particular attention given to poor, women, and vulnerable populations. These activities require a coordinated effort between the agencies involved--public and private (including local businesses and civil works contractors) and community stakeholders. The CAPP provides a framework to help implement such activities.

The PMC is design and manage a CAPP to that extends beyond the Communications Plan above to present information on BRT in general, engineering designs and service plans for the project to the public/civil society and obtain their feedback and inputs to the planning and implementation process, including for feedback on such aspects as proposed routes, land acquisition and resettlement, and programs for displaced workers.

The plan should use a variety of methods to obtain the views of the public, as appropriate. This could include public meetings, meetings with stakeholder groups, focus groups, and questionnaires. Care should be taken to ensure that the views of women and vulnerable groups are obtained and presented to the design teams.

The CAPP should include the following:

a) stakeholder analysis to identify target community groups or segments;
b) community awareness and outreach activities to reach out to the target groups; and
c) stakeholder participation with respect to system design and branding, operational plans and passenger services.

The Plan will consider focus groups meetings, creation of a mail list to communicate news and inform about the project progress and expectations.

The PMC will elaborate a plan for evaluation of services to be periodically applied. The first survey will be two months after operations start. The following survey will be six months after the starting of operations. The third one year after starting of operations and all subsequent surveys will have one year periodicity.

## 5. PROJECT DURATION AND KEY PERSONNEL

### 5.1 Project Duration

The PMC will be a technical resource that will support the development and implementation of BRT for Medan and Bandung.

The duration of the contract is for a period of **56 months**, with possibility of extension according to project development.

The project will end six months after operations start. Tentative starting date is expected to be **November 01, 2022 on June 30, 2027.**

### 5.2 Key personnel requirements

The following requirements are a broad description of the likely expertise needed for this consultancy assignment. The Consultant may propose additional experts and/or suggest for different team composition in the Technical Proposal as may be needed to fulfil this TOR.

The Consultant may mobilize supporting technical experts and administrative staff as necessary to execute the scope of services. The Consultant is encouraged to engage diverse team compositions, including a mixture of genders.

The positions listed in Table 2 will be evaluated, while non-key expert positions in Table 3 are indicative only. Sub-professional and support staff shall be proposed by the Consultant as they deem appropriate to fulfil the requirements of these TOR.

*Table 2: Key experts*

| No | Team member | Minimum requirements | Time required (Months) |
|---|---|---|---|
| 1 | Project Manager /Team Leader (International) | Experience as the overall project manager or director for major stages of a BRT project until the start of revenue operation. Able to manage large multi-disciplinary teams. The project team leader must have **master's degree** and have fifteen **(15) years** general experience in public transport planning and design in his/her home country and at least one other country, with at least five **(5) years**' experience as team leader/project manager in project planning and development work for fully functional bus rapid transit (BRT) projects with proven performance, including in developing countries. | 52 |
| 2 | Public Transport Specialist (international) | **Master's degree** in engineering, architecture or urban planning or related field with professional registration in transportation planning, city and regional planning or related field. Should have minimum general work experience of ten **(10) years** and minimum specific experience of five **(5) years** in transportation planning, including demand and supply modelling and analysis for urban transport systems in his/her home country and at least one other country. He or she must have specific experience in planning and modelling for urban bus systems in one or more developing countries. Familiarity with road-based public transport in East Asia is highly desirable. | 52 |

| No | Team member | Minimum requirements | Time required (Months) |
|---|---|---|---|
| 3 | BRT Planning and Design Specialist (international) | **Master's degree** in civil engineering or relevant discipline. At least ten **(10) years'** experience, with a minimum specific experience of five **(5) years** in engineering design for transport projects in his/her home country and at least one other country**.** Must have specific hands-on experience in BRT infrastructure design of a fully functional BRT system with proven performance in one or more developing countries. | 18 |
| 4 | ITS specialist International) | **Master's degree** in electrical or electronic engineering or relevant discipline. At least ten **(10) years'** experience, with a minimum specific experience of five **(5) year's** experience in ITS design and implementation in urban transit (i.e. passenger information systems, fleet management system, communications & control systems, etc.) in one or more developing countries. | 12 |
| 5 | Fare Collection System Specialist (international) | **Master's degree** in electrical engineering or relevant discipline. At least ten **(10) years'** experience, with a minimum specific experience of five **(5) years** in automated fare collection and ticketing systems projects for Mass Transit systems in his/her home country and at least one other country. Must have specific hands-on experience in design, procurement and implementation of electronic ticketing equipment and systems in one or more developing countries. | 8 |
| 6 | Institutional Development Specialist (International) | **Bachelor 's degree** in management, communications, social sciences or related fields; At least five **(8) years'**experience in the social and institutional aspects of urban transport. He/She must have specific experience in development of BRT delivery institutions and in engagement with private transport operators in one or more developing countries and have experience working in the region. | 18 |
| 7 | Bus Industry Expert<br><br>(International) | **Bachelor's degree** in management, communications, social sciences or related fields; At least five **(8) years'** experience in the social and institutional aspects of public transport. He/She must have specific experience in planning and implementing bus industry reorganization and in engagement with unorganized/ informal private transport operators in one or more developing countries. | 12 |
| 8 | Environmental & Social Specialist | **Master's degree** in Environmental and/or social Science/ Management or equivalent qualification in a related field. **Familiarity with WB's Environment and Social Framework** is needed. At least **5-8 years** in environmental management or impact assessment, including environment health and safety (EHS) management related to infrastructure/urban projects. | 12 |
| 9 | PPP and Financial Specialist (International) | MBA, **Master's degree** in engineering/finance, Chartered Financial Analyst (CFA) certification, or similar certification of skills/knowledge in financial analysis and management. At least ten **(10) years**' experience, with six **(6) years** of demonstrated experience in project financial analysis and financial modelling, including for large transport projects; experience in project structuring, and risk analysis, allocation and management in public sector on **projects** in his/her home country and at least one other country**.** Prepared financial analysis for at least three **(3) public transport projects** in his/her home country and at least one other country**.** | 12 |

| No | Team member | Minimum requirements | Time required (Months) |
|---|---|---|---|
| 10 | Legal Specialist (international) | **Master's degree** in law and relevant qualification to practice. At least ten **(10) years** general experience, with minimum of six **(6) year**s of demonstrated experience in drafting PPP contractual agreements for infrastructure projects and other related documents/agreements, managing bidding and procurement process, contract negotiations, and resolving legal issues on procurement matters. Must have worked on legal issues in at least three **(3) public transport projects** in his/her home country and at least one other country. | 6 |

*Table 3: Non-Key experts*

| No. | Team member | Minimum requirements | Time required (Months) |
|---|---|---|---|
| 1 | Deputy Project Manager (National) | Experience as the overall project manager or director for major stages of a BRT project until the start of revenue operation. Able to manage large multi-disciplinary teams. The deputy project manager must have a **master's degree** and have ten **(10) years** general experience in public transport planning and design, with at least three **(3) year'**s experience as team leader/project manager in project planning and development work for bus rapid transit (BRT) projects, including in developing countries. Familiarity with road-based public transport in Indonesia would be a strong advantage. | 52 |
| 2 | Public Transport Specialist (National) | **Bachelor's degree** in engineering, architecture or urban planning or related field with professional registration in transportation planning, city and regional planning or related field. Should have minimum general work experience of five **(5) years** and minimum specific experience of three **(3) years** in transportation planning, including demand and supply modelling and analysis for urban transport systems in the country. | 52 |
| 3 | Bus Planning and Design Specialist (National) | **Bachelor's degree** in civil engineering or relevant discipline. At least five **(5) years'** experience, with a minimum specific experience of three **(3) years** in engineering design for transport projects. Have specific hands-on experience in Urban Bus and BRT infrastructure design. | 52 |
| 4 | a Urban Planning Specialist (International) | **Master's degree** in urban planning, urban design, spatial design with ten (10) years experience, with a minimum specific experience of five (5) years in transportation planning in **international projects.** | 18 |
| | b Urban Planning Specialist (National) | **Master's degree** in urban planning, urban design, spatial design with ten (10) years experience, with a minimum specific experience of five (5) years in transportation planning in Indonesia**.** | 18 |
| 5 | ITS Specialist (National) | **Bachelor's degree** in civil engineering or relevant discipline. At least five **(5) years'** experience, with a minimum specific experience of three **(3) years** in information-, communications- and control-systems projects. Specific hands-on experience in planning and implementation of relevant ITS in transit is preferred. | 18 |
| 6 | BRT Fleet Specialist (International) | **Master's degree** in mechanical engineering or relevant discipline. At least ten **(10) years**' experience, with a minimum specific experience of five **(5) years**' experience with bus specification, manufacturing and maintenance with at least one project carried out outside his/her home country. Experience in | 18 |

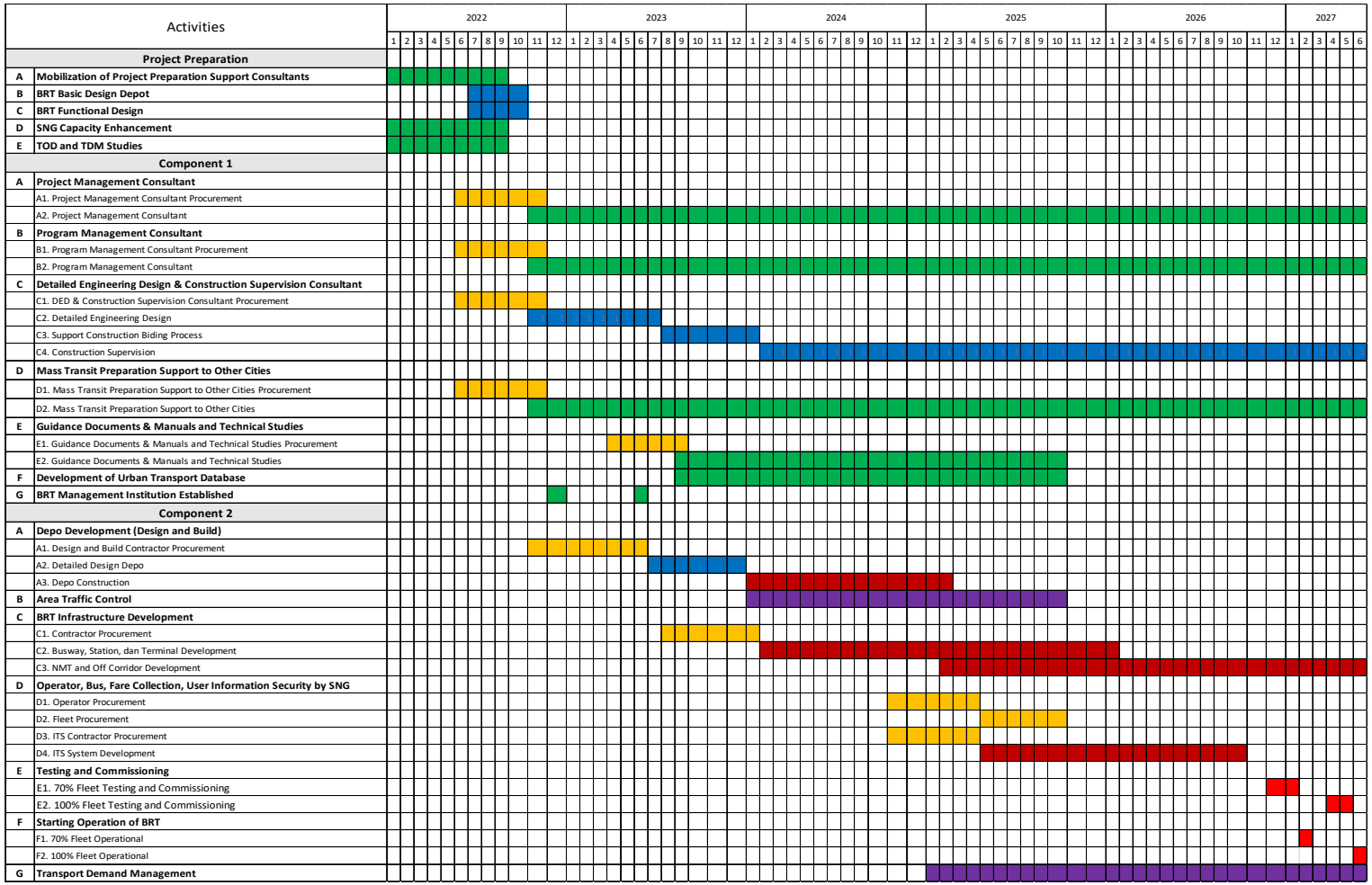
| No. | Team member | Minimum requirements | Time required (Months) |
|---|---|---|---|
| | | Indonesia or Southeast Asia is preferred. Must have hands-on experience in rolling stock maintenance contracts and associated logistics in a similar context. Experience with both diesel and battery electric buses is required. | |
| 7 | Institutional Development Specialist (National) | **Bachelor's degree** in management, social sciences or related fields; At least five **(5) years'** experience in the social and institutional aspects of urban transport. He/She must have specific experience in development of BRT delivery institutions and in engagement with private transport operators in one or more developing countries and have experience working with North Sumatra and/or West Java local governments. | 18 |
| 8 | Senior Civil Engineer (International) | **Master's Degree** in civil engineering with minimum of **8 years** engineering experience after tertiary education. Professional Status with at least **5 year's** experience in the design of infrastructure for mass transit system or similar projects in his/her home country and at least one other country. The senior engineers shall have relevant experience in the design of roads, highways and at-grade and elevated structures. | 18 |
| 9 | Pavement engineer | **Bachelor's degree** in pavement engineering with minimum of **5 years** engineering experience after tertiary education. Professional Status with at least **3 years** experience in the design of rail transit system and infrastructure or similar projects. | 18 |
| 10 | Structural Engineer | **Bachelor's degree** in structural engineering with minimum of **5 years** engineering experience after tertiary education. Professional Status with at least **3 years** experience in the design of rail transit system and infrastructure or similar projects. | 18 |
| 11 | Geotechnical Engineer | **Bachelor's degree** in geotechnical engineering with minimum of **5 years** engineering experience after tertiary education. Professional Status with at least **3 years** experience in the design of rail transit system and infrastructure or similar projects. | 18 |
| 12 | Mechanical and Electrical Engineer | **Bachelor's degree** in mechanical and electrical engineering with minimum of **5 years** engineering experience after tertiary education. Professional Status with at least **3 years** experience in the design of rail transit system and infrastructure or similar projects. | 18 |
| 13 | Traffic Engineer | **Master's degree** in engineering. At least ten **(10) years** experience, with six **(6) years** specific experience in traffic engineering and traffic management work, including in one or more developing countries. | 12 |
| 14 | Legal Specialist (National) | **Master's degree** in law and qualification to practice law in Indonesia. At least ten **(10) years** general experience, with minimum of six **(6) year**s of demonstrated experience in drafting contractual agreements and other related documents/agreements, managing bidding and procurement process, contract negotiations, and resolving legal issues on procurement matters. | 12 |

| No. | Team member | Minimum requirements | Time required (Months) |
|---|---|---|---|
| 15 | Land Acquisition and Resettlement Specialist | **Master's degree** in related fields. At least ten **(10) years** of general experience, with six **(6) years** of demonstrated experience in the preparation and implementation of land acquisition and resettlement action plans in accordance with Indonesia requirements; experience with preparation or implementation of **resettlement action plans for three (3) projects** financed by external development financing institutions (e.g., WB, ADB, JICA, etc.). Familiar with Indonesia laws and regulations related to land acquisition and resettlement. | 8 |
| 16 | Social Specialist | **Bachelor's degree** in Social Science. Some formal training/courses on gender and social development would be beneficial. At least **3 -5 years** in the area of social development or gender and social inclusion, including specific experience of working on social management of urban/transport sector related projects. The Social specialist should have specifically worked on preparation or implementation of social safeguards or E&S instruments in projects for an Implementing Agency or a Supervision Consultant Firm. Experience working with local governments is strongly preferred. | 12 |
| 17 | Communications and Consultation Specialist | **Master's degree** in a related field. At least ten **(10) years** general experience, with at least six **(6) years** experience in public relations, community relations, marketing, or mass communications in Indonesia, with specific experience in public consultations/participation for planning or development of at least one public transport project. Familiar with Indonesia laws and regulations. | 18 |
| 18 | Transport Economist | **Master's degree** in related fields. At least ten **(10) years** general experience, with six **(6) years** of demonstrated experience in economic assessment, sector assessments, industry analysis, project economic analysis, demand-supply for public services, opportunity cost implications, etc. Helped to prepare or conduct feasibility analysis/studies for at least three (3) transport projects (public- funded). Must be familiar with guidelines on project financial and economic assessment and with Indonesia laws and regulations. | 12 |
| 19 | Bus Industry Expert (national) | **Bachelor's degree** in management, communications, social sciences or related fields; At least fifteen **(15) years'** work experience in the public space. He/She must have experience in planning and implementing bus industry reorganization and/ or in engagement with unorganized/ informal private transport operators in Indonesia. He should have strong communications skills and ability to negotiate and dialogue on difficult topics. | 18 |

## 6. TIMELINE

The tentative timeline presents the main activities and time to execute these activities. The timeline needs to be updated as there are major inconsistencies for the duration of the project. The PMC has the responsibility to coordinate all other consultants and show gaps and problems with recommendations of solutions for the problems.

*Figure 11: Indicative project timeline*



## 7. MAIN MILESTONES

The project has many milestones according to the tentative time schedule. The PMC should be prepared to start working from the first day of the contract. The schedule will be adjusted according to events and decisions of DGLT and local authorities that will give the green line to start activities that depend on their approval. The PMC shall act to make the schedule function as planned.

*Table 4: Indicative key project milestones*

| Year | Month | Day | Milestone |
|---|---|---|---|
| **2022** | November | 1 | Contract Signing PMC |
| | November | 15 | Detailed Engineering Design Start |
| **2023** | July | 1 | Detailed Design Depot Start |
| | July | 31 | Detailed Engineering Design Finish |
| | August | 1 | BRT Infrastructure Bidding Process Start |
| | December | 31 | Detailed Design Depot Finish |
| **2024** | January | 1 | Depot Construction Start |
| | January | 31 | BRT Infrastructure Bidding Process Finish |
| | February | 1 | BRT Infrastructure (Busway, Station, Terminal) Construction Start |
| | November | 1 | Bus Operator Bidding Process Start |
| | November | 1 | ITS Contractor Bidding Process Start |
| **2025** | January | 1 | Transport Demand Management Start |
| | February | 28 | Depot Construction Finish |
| | February | 1 | NMT and Off Corridor Development Start |
| | May | 1 | ITS System Development Start |
| | May | 1 | Fleet Procurement Process Start |
| **2026** | January | 31 | BRT Infrastructure (Busway, Station, Terminal) Construction Finish |
| | October | 31 | ITS System Development Finish |
| | October | 31 | Fleet Procurement Process Finish |
| | December | 1 | 70% Fleet Testing and Commissioning Start |
| **2027** | February | 28 | 70% Fleet Operational |
| | April | 1 | 100% Fleet Testing and Commissioning Start |
| | June | 30 | 100% Fleet Operational |
| | June | 30 | End of Project |

## 8. DELIVERABLES

### 8.1 Inception Report

The PMC shall prepare and present to the Client an Inception Report within 1 month from Contract signing, summarizing the initial review of available documentation, issues or concerns for which information or action is needed from the Client, and activities and actions to be undertaken in the next reporting period.

### 8.2 Project Management Plan

The Services shall be undertaken in accordance with an approved Project Management Plan specifically related to the scope of the Services.

The PMC shall prepare a Project Management Plan within 2 months from Contract signing. The Project Management Plan shall provide all necessary information showing how the Services will be appropriately controlled and managed, including the following:

a) Programme of all key activities
b) Organization chart
c) Staffing schedule
d) Stakeholder Register
e) Budget and cash flow forecast
f) Deliverables and invoicing schedule
g) Communications protocols
h) Risk register
i) Work locations, work allocations and means of coordination and control
j) Document control and management system
k) Meetings
l) Reporting
m) Quality management system
n) Health and safety plan, as applicable

The other management plans to be prepared by the PMC, covering the relevant requirements of this TOR, include:

- Procurement Plan
- Contract Management Plan
- Industry Reorganization & Engagement Plan
- BRT Operator Training Plan
- BRTME Institutional Development Plan
- Communication and Outreach Strategy & Plan
- PR and Advertising Plan
- Community Involvement and Participation Plan (CAPP)

### 8.3 Monthly reports

PMC will prepare monthly and quarterly reports showing the accomplishments, delays, obstacles, and a revised timeline table with all measures to recover delays. The follow-up procedures will present responsibilities for delays and for decisions necessary to develop the project.

### 8.4 Review reports

PMC will review documents prepared by the DED and construction supervision consultant, showing gaps, problems, and pointing solutions. PMC will intermediate the decisions by PIU or DGLT to solve problems. PIU will approve reports and acceptance of civil works after clearance of reports by the PMC. The review will include:

- Safeguards DED reports
- DED Design Review Report
- Depot construction Review Report
- Construction supervision reports
- ITS specifications and implementation supervision reports
- DED Traffic management Plan and implementation reports
- M&E Reports on Results Indicators

### 8.5 Subject reports

PMC will prepare subject technical reports for the key components of the Project, as required by the Client, such as:

- Functional requirements and detailed technical specifications for the BRT vehicles
- Fare Policy Report
- Financial Model
- Road Safety Audit Report(s)
- E&S Audit reports/ third party reports as specified in the Environment & Social Commitment Plan
- Parking Strategy & Masterplan at Corridor level
- End of bus and O&M service procurement process
- End of ITS procurement process
- Program for disposal of old vehicles
- Cost & Revenue Report for Existing Operators
- Technical Memoranda as required
- M&E Reports as per frequency and methodology specified in Project Appraisal Document of Bank

### 8.6 Project Operations Report

PMC will present the draft project operations report one month and six months after operations start covering service performance, traffic volumes, customer satisfaction etc.

### 8.7 Project Mid-Term Review Report & Project Completion Report

PMC shall prepare the Mid-Term Review and Completion Reports as per the requirements of the Bank. Mid-term review reports at Project mid-term as per agreements with the World Bank and tabulating the current status of implementation, major issues and challenges that require attention, and the likelihood of achievement of Project Development Objectives (PDO) as captured by the results framework;

Project Completion Report at the end of the project reviewing the implementation status and completion of key project activities, major project achievements and PDO, challenges and lessons learned for future projects.

## 8.8 Key deliverables

The PMC will provide regular meetings and discussions, at least monthly, progress reports that document activities completed and those planned and weekly updates to generalize information, target, and evaluation. In addition, task specific reports will be produced as described in the preceding sections and as required by the client. PMC outputs will also include preparation of the standard financial and technical reporting requirements under the various loan agreements associated with the Medan and Bandung BRT project. Key deliverables are shown in the following table.

*Table 5: Key deliverables*

| Report | TOR Reference | Submission date* |
|---|---|---|
| Inception Report | 4.1 | 1 month |
| Project Master Schedule | 4.2.1 | 2 months |
| Procurement Plans for DGLT | 4.2 | 2 months |
| Project Risk Register | 4.2.2 | 2 months |
| BRT services operational plans | 4.3.2 | |
| Technical / functional specifications BRT Fleet | 4.3.3 | |
| Fare Policy Report | 4.3.4 | |
| Financial model Report | 4.3.5 | |
| DED Review Report | 4.4.1 | |
| Parking Strategy & Masterplan for BRT Corridor | 4.4.2 | |
| DED Environmental and Social Safeguard Compliance Report | 4.4.2 | |
| Road Safety Audit Reports | 4.4.3 | |
| DED Traffic Management Review Report | 4.4.3 | |
| Technical / functional specifications ITS components | 4.4.4 | |
| Bus and Bus Operator Procurement Report | 4.5 d | |
| ITS Procurement and Supervision Reports | 4.5 e) & i) | |
| Existing Transport Operator Engagement Plan | 4.8 | |
| Revenue and Costs model of existing services | 4.8 | |
| Old Vehicle Disposal Plan | 4.8 | |
| Training & Skill Development Plan for Existing Operators | 4.8 | |
| Transaction Advisory Due Diligence Study Report | 4.9.1 | |
| PPP Options Report including financial model | 4.9.2 | |
| Market Sounding report | 4.9.2 | |
| Term Sheet | 4.9.2 | |
| Documentation for GOI approvals | 4.9.2 | |
| PPP Bidding and contract documents | 4.9.3 | |
| Transaction Closeout report | 4.9.4 | |
| Business Plan & Financing Plan for the BRTME | 4.10 | |
| Institutional & Organizational Structure of BRTME | 4.10.1 | |
| Training programs for the BRTME staff | 4.10.1 | |
| Business Process Manuals including for BRT O&M | 4.10.1 | |
| E&S Safeguard Review reports | 4.11 b) | |
| E&S Audit reports | 4.11 c) | |

| Report | TOR Reference | Submission date* |
|---|---|---|
| Capacity development plan | 4.11.1 | |
| BRT Communications Strategy and Plan | 4.12 | |
| BRT System Branding and handbooks/design manuals | 4.12 | |
| Story matrix for media relations | 4.12.1 | |
| Advertisement material | 4.12.6 | |
| Community Involvement and Participation Plan (CAPP) | 4.13 | |
| 6-monthly M&E Reports based on Results Framework | | |
| Mid-Term Review Report | 4.2.4 | 24 months |
| Project Completion Report | 4.2.4 | 48 months |
| Project Progress Report | 4.2.4 | monthly |
| Road Safety Audit Report & Crash Database Development Plan for WJ/NS | 4.4.3 | As required |
| E&S Audit Reports & Third Party Reviews | 4.10 | As required |
| Technical papers & memoranda on design & O&M issues | 4.4.1 | As required |
| Project Operations Report | 8.6 | 1 month & 6 months from start of operation |

** from the date of commencement of the Services*

### 8.9 Compliance with the World Bank Reporting Requirements

The PMC will assist DGLT in the preparation of periodic reports to comply with the normal financial and technical reporting requirements of the World Bank and other financiers under their respective loan agreements.

### 8.10 Communication arrangements

The PMC will report to the DGLT PMU, and shall engage extensively with officials indicated by DGLT, BBMA and Mebidang, besides PIUs.

DGLT, BBMA and Mebidang will indicate PMC counterparts in the beginning of the contract and define all communication channels with the counterparts.

DGLT will coordinate with BBMA and Mebidang to form a Steering Committee to manage the project.

The Steering Committee will indicate executive members to receive and review the reports and make the project follow-up. The problems will be discussed with the Steering Committee that will take decisions or consult higher hierarchy to decide.

The steering committee will define all communications channels and reporting procedures between the PMC and the Steering Committee, the format of the reports, number of copies and media of the reports.

The PMC shall prepare a directory to store all reports of the project as a database that the Steering Committee members can access to consult.