ISKANDAR MALAYSIA BUS RAPID TRANSIT (IMBRT) LEAD CONSULTANT INDUSTRY BRIEFING

BY: RUDYANTO AZHAR
(HEAD OF BRT ISKANDAR MALAYSIA)
PURPOSE OF TODAY

1. Understanding of IMBRT project
2. Understanding Lead Consultant roles
3. Understanding of procurement approach
4. We want your feedback
AGENDA

- Background of Iskandar Malaysia
- IMBRT project implementation
- What is Lead Consultant?
- Procurement approach
BACKGROUND OF ISKANDAR MALAYSIA

- AREA: 2,217 Km² / 550,000 ac
- Population 1.9 million
- 3 Times the size of Singapore
- Five local authorities
- > 350,000 people cross border /day
1. Blueprint
2. Sector Development
3. Incentives
4. Investment Destinations
5. 9 Promoted Sectors
6. Iskandar Service Centre
7. Investment Monitoring

GOVERNMENT OF MALAYSIA

Promote
Facilitate
Plan

Economic Corridor Promotion Agency

Co-chairmen: Prime Minister and Johor Chief Minister

Federal Government
Johor state Government

BACKGROUND OF ISKANDAR REGIONAL DEVELOPMENT AUTHORITY (IRDA)
Investment Update 2018
2006 to Sept’18

GOVERNMENT OF MALAYSIA
All in RM’ Billion

272.9b
Cumulative Investment as at Sept’18

59%
Cumulative RI/CI

9.4%
CAGR for 4yrs

60% : 40%
Domestic : Foreign

Committed investment in 2018, RM19.8b

Realized investment in 2018, RM20.8b

Promoted Sector | RM’Bil | Other Sector | RM’Bil
--- | --- | --- | ---
Manufacturing | 62.74 | Mixed Development | 86.56
Logistics | 7.36 | Residential Properties | 50.41
Tourism | 7.43 | Industrial Properties | 20.92
Healthcare | 4.41 | Utilities | 12.97
Education | 3.29 | Government | 10.67
Finance | 2.09 | Emerging Technologies | 2.94
Creative | 1.13 | | 

(32%) 88.45
(68%) 184.47

Source: MIDA Mar’ 2018 & Audited Corporate Announcements
SMART MOBILITY IS PART OF SMART CITY (SCIM) MASTERPLAN

**Focus Areas**

- **Economy**
  1. Economic Growth and Value Creation
  2. Equitable Wealth Distribution
  3. Innovative Economic Growth
  4. Entrepreneurship

- **Environment**
  1. Clean Environment
  2. Green Development
  3. Smart Growth
  4. Environment Protection
  5. Green Infrastructure
  6. Green Economy

- **Mobility**
  1. Efficient Road Accessibility
  2. Non-Motorized Accessibility
  3. Availability of ICT Infrastructure
  4. Efficient Public Transportation

**Dimensions**

- **Economy**
  1. Public Private Partnership
  2. Transparent Governance
  3. Public Participation
  4. Efficient Public and Social Services

- **Environment**
  1. Touristic/Recreational Attractiveness
  2. Safety and Security
  3. Housing Quality
  4. Health Conditions
  5. Low Carbon Lifestyle
  6. Educational Quality
  7. Cultural Facilities

- **Mobility**
  1. Caring Community
  2. Racial Harmony
  3. Skilled and Talented Human Capital

**Characteristics**

- **Economy**
  1. Economic Growth and Value Creation
  2. Equitable Wealth Distribution
  3. Innovative Economic Growth
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**Programs**

- **Economy**
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- **Mobility**
  1. Caring Community
  2. Racial Harmony
  3. Skilled and Talented Human Capital
Mobility is challenged with increased population and economic activities.

**Increase Population of Iskandar Malaysia**
- 2005: 1.5mil
- 2018: 1.9mil
- 2025: 3.0mil

**Limited mode of public transportation systems**

**Traffic is building up on major transport corridors**

**If nothing is done...**
- **PT modal split** will drop from 15% to 10%
- **Accessibility** will drop from 39% to 14%
- Roads are 3 times more congested

Thus, IRDA needs to provide comprehensive plan towards sustainability and inclusivity through analysis of people mobility trend in IM.
Double Tracking project from Gemas to JB is expected to open new opportunity for commuter train services.

- Inter-City Train From KL/Kota Bahru
- Possible RTS link From Singapore
ISKANDAR MALAYSIA TRANSPORTATION BLUEPRINT 2010-2030
Transformation of taxi services and introduction of new services through Mobility Management

Optimum Road Network
Efficient Public Transport
Last Mile Connectivity
ICT as Enabler

City Taxis (metered)
Rideshare Taxis (zonal)
Sin/JB Taxis (zonal)
Airport Taxis (zonal)
Coordinated cross border services

- Optimum Road Network
- Efficient Public Transport
- Last Mile Connectivity
- ICT as Enabler

Map showing the locations of JB Grand Central, Senai Airport Terminal, Ulu Tiram Sentral, and JB Central, with arrows indicating the flow of transport services such as Malaysian Bus Express, Spore/JB Buses, and Singapore Bus Express & Tour Coaches.
Domestic water taxi services as alternative mode of transport
Transformation of Bus Industry with Bus Rapid Transit (BRT)
Mass flow transit systems using high-capacity buses in special lanes, with pre-paid ticketing systems; providing better coverage access, shortening travel time with affordable fares.

**Target by 2025**

1. Increase in public transport coverage from 39% to 90%
2. Increase in public transport modal share from 15% to 40%
ISKANDAR MALAYSIA TRANSPORTATION BLUEPRINT 2010-2030
Promoting NMT for first and last mile connectivity

- Optimum Road Network
- Efficient Public Transport
- Last Mile Connectivity
- ICT as Enabler

Transit Oriented Development
- Adopt 8 TOD principles (ITDP’s TOD Standards)
- Proposed TOD policies and guidelines

Non-Motorized Transport
- NMT network along IMBRT stations (4 concentration areas)
- Phase 1 proposed pedestrian walkway and bikeway on 5 busway alignments
- Bike sharing network and bike sharing station

Aerial View Bicycle Parking
Bicycle Parking In Hangzhou, China
SMART INTEGRATED MOBILITY MANAGEMENT SYSTEM

Transport Demand Management

Traffic Restraint Zone
Heavy vehicle traffic zone
Residential traffic Zone
Zero Traffic Zone
Restricted Parking Zone
BRT Lines (or more)
**Rationale**

Many users can sometimes feel lost…

The main constraint concerning the use of public transport are the difficulties in getting information.

**How can this be done right?**

1. **Integrate and organize public transport services**
2. **Facilitate usage of public transportation through travel advisory, reservations and common ticketing**
3. **Provide transport services to the disabled, elderly and rural areas utilizing demand responsive transport**
4. **To get more potential users to actually try out public transport and eventually change mobility behaviour**
AGENDA

- Background of Iskandar Malaysia
- IMBRT project implementation
- What is Lead Consultant?
- Procurement approach
## IMBRT PROJECT TIMELINE

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### Consultant
- Land acquisition
- Construction (Busway, Station and Terminal)
- BRT Operation & Mgmt System
- Stakeholder Engagement

### BRT Operation & Mgmt System
- Acquisition
- (for road widening)

### Project supervision
- Tender
- EPU & MOF
- DPPES Review
- DED review, tender briefing
- Tender
- EPU & MOF
- DPPES Review
- DED review, tender briefing

### Tebrau line
- Construction (30 months) * Testing & Commissioning (T&C) – Q3 2022
- Construction (30 months) * Testing & Commissioning (T&C) – Q3 2022
- Construction (24 months) * Testing & Commissioning (T&C) – Q1 2022

### Skudai line
- Design integration
- Tender
- Supply, deliver, install, integration, testing & commissioning
- Design integration
- Tender
- Operation asset procurement

### Iskandar Puteri line
- Design integration
- Tender
- Operation asset procurement

### Engagement plan, Public exhibition and syndication
- Communication & Promotion (awareness, traffic management etc.)
IMBRT PROJECT OVERVIEW

Service Routes
- 42 Feeder routes
- 26 Direct routes
- 51km of Trunk Routes

Number of stations
- 39 stations
  - Tebrau 19
  - Skudai 13
  - Iskandar Puteri 7

3 hubs with TOD
- Tebrau
- Skudai
- Medini

CONNECTIVITY

BRT System
- Ops System
- AFCS, Mobile
- BIS, JP
- BAMS
- IT Infra
- BCC

BRT Fleet & Operation
- Trunk line articulated bus
- Direct service bus
- Feeder bus

Viable business model and O&M

1. Increase public transport coverage from 39% to 90%
2. Increase public transport modal share from 15% to 40%
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Viable business model and O&M

1. Increase public transport coverage from 39% to 90%
2. Increase public transport modal share from 15% to 40%
Seamless Connectivity to RTS, HSR, KTM Komuter services and Inter-city bus terminals
SERVICE ROUTE
3 Main Trunk Routes
BUS RAPID TRANSIT (BRT) WILL BE THE BACKBONE OF PUBLIC TRANSPORT IN ISKANDAR MALAYSIA

First and last mile...

Point to point, limited stops
Pick up and drop off at highly populated areas such as malls, hospitals, UTC and public transport hubs with park and ride facilities

3 Trunk Routes

Within 5 km radius from BRT station
Connecting residential and employment centres to BRT stations
Using existing road and bus stops
Short journey

26 ROUTES

42 ROUTES
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Viable business model and O&M

Increase public transport coverage from 39% to 90%
Increase public transport modal share from 15% to 40%
BRT STATION
Station Design Components

- Preferably median dedicated busway and station
- Direct connectivity to adjacent buildings
- Level platform boarding
- Pre-boarding fare collection
- Cycling lane and parking
BRT STATION
Artist impression

AFTER
SRI PUTRI
BRT STATION
Artist impression

AFTER JB SENTRAL
BRT STATION
Artist impression
BRT STATION
Artist impression

AFTER DEPOH POLIS
IMBRT PROJECT OVERVIEW

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Viable business model and O&M

1. Increase public transport coverage from 39% to 90%
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There are opportunities to develop TOD at the 3 hubs in order to encourage ridership. Mixed income TOD concept of urban planning will attract the M40 group to live, work and play around and along IMBRT alignments.
3 HUBS WITH TOD
PROPOSED UTM HUB (ARTIST IMPRESSION VIEW)
3 HUBS WITH TOD
PROPOSED MEDINI HUB (ARTIST IMPRESSION VIEW)
3 HUBS WITH TOD
PROPOSED DESA JAYA HUB (ARTIST IMPRESSION VIEW)
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& CONNECTIVITY

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Viable business model and O&M

Increase public transport coverage from 39% to 90%
Increase public transport modal share from 15% to 40%
ITS ELEMENT IN IMBRT CORRIDOR
(ARTIST IMPRESSION AT JALAN TEBRAU)

- Centralized Solar lighting
- Traffic signal priority system
- Station PA announcement system
- BRT station with WIFI
- Solar panel roof top
- Passenger information display
- Public benefit from the BRT web and mobile apps system
- Busway intrusion system
- GPS Bus Tracking
- BRT Platform door system
- CCTV
- Ticket Validator & gate
- Ticket vending machine
ITS ELEMENT IN IMBRT BUS

- PA Speaker
- Passenger information display
- CCTV
- LCD DISPLAY
- Microphone
- Driver console
- Validator
- ETM
- On Board Unit

Passenger information system (PIS) display
IMBRT PROJECT OVERVIEW

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**3 hubs with TOD**
- Tebrau
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- Medini & CONNECTIVITY

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**BRT Fleet and Operation**
- Trunk line articulated bus
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**Viable business model and O&M**

1. Increase public transport coverage from 39% to 90%
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BRT VEHICLE
Potential Clean Energy Mixed Fleet Operations
- Artist Impression

High capacity fleet for trunk routes

Charging facilities at hub

10m – 12m buses for direct service

6m - 8m buses for feeder service
EXISTING LOCAL OPERATORS SHALL BE INVITED TO BID FOR IMBRT SERVICE PACKAGES
AGENDA

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IMBRT LEAD CONSULTANT
DEFINITION

The lead consultant selects, appoints and directs the work of other associate consultant and is the main point of contact between the client (IRDA / BRTIM) and the consultant team.

Refer to Pekeliling Perbendaharaan Malaysia PK3.1/2013 para 9
PROPOSED IMBRT TENDER PACKAGES

1. Trunk Line 1
   Iskandar Puteri
   - Hub Medini (D&B)
   - Busway & Station
   - Common Assets (eg. Lifts, escalators, master key systems, solar system, fire systems etc)

2. Trunk Line 2
   Skudai – Tun Razak
   - Hub UTM (D&B)
   - Busway & Station

3. Trunk Line 3
   Tebrau - JBCBD
   - Hub Desa Jaya (D&B)
   - Busway & Station

4. System
   - BOMS
     - P&S, FMS, CCTV, TCSS, PDS, BIS, BAMS, SCADA, IT, MCS, NMS, BCC, CALL
   - AFCS
     - Backoffice, Ticketing, POS, Clearing House, Fare media, Integration

5. Bus
   - Bus Supplier 1
   - Bus Supplier 2
   - Bus Supplier 3

6. Operator
   - Operator 1
   - Operator 2
   - Operator 3

Government Grant (Civil Infra)

Private funding (Operating Asset)
IMBRT LEAD CONSULTANT

NEED STATEMENT

To design, supervise and commission of the infrastructure works and operating assets (such as, but not limited to stations, hubs, dedicated bus lanes, systems and buses)

To advice the client on the BRT operations and management (such as, but not limited to network, performance standard, quality and safety management standard, product and marketing plan etc)

To advice on financial sustainability and financial models for the whole scheme of the IMBRT project (such as, but not limited to institutional structure, route permit, fare policy and fare structure plan, PFI and alternative funding/financing models for relevant packages etc)
IMBRT LEAD CONSULTANT
GENERAL SCOPE

To provide Detailed Engineering Design and Construction Supervision Services for the IMBRT project

Require skills and expertise to ensure that all requirements and specifications are identified from the early planning stage inclusive of authority approvals to minimise the need of variation orders

To manage, monitor and coordinate the project implementation - the infrastructures construction, BRT systems and operation (operators and the buses) and to advise on the financial sustainability

Responsible for the planning and evaluation of IMBRT service operation, creating business framework, PPP business model and to propose various push and pull policies
FORMING YOUR CONSORTIUM – EXAMPLE OF SPECIALISATIONS

Compulsory Requirements

- The Lead Consultant must be a Malaysian incorporated firm registered with MOF
- Associate Consultant can be part of the Lead Consultant’s group of companies or an external consulting firm
- The Associate Consultant can be a foreign consulting firm who is registered with MOF
PROJECT GOVERNANCE STRUCTURE

Ministry of Finance

Ministry of Transport

IMBRT Implementation Executive Committee (IMBRT EXCO)

IMBRT Steering Committee (IRDA)

BRTIM Sdn Bhd (100% subsidiary of IRDA)

Lead Consultant and Sub Consultants Team

Contract Advisors etc

Independent Check Engineer, Peer Reviewer

Work Package Contractors

- Funding and business model
- Procurement approval

- Interface with Agencies
- Strategic issues resolution

- Implementing Agency
- Project Oversight

- Project Owner
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IMBRT LEAD CONSULTANT PROCUREMENT APPROACH

To invite via OPEN TENDER suitably qualified tenderers to submit their technical and financial proposals to provide lead consultancy services for: “Detailed Engineering Design and Construction Supervision Services for the Implementation of Iskandar Malaysia Bus Rapid Transit ("IMBRT") System”
PURPOSE OF TODAY

1. Understanding of IMBRT project
2. Understanding Lead Consultant roles
3. Understanding of procurement approach
4. We want your feedback
IMBRT LEAD CONSULTANT QUESTIONNAIRE

Objective:
To …

Go to:

www.imbrrt.com.my/???
THANK YOU

www.iskandarmalaysia.com.my
Question and answer session