



Traffic Congestion & Mitigation Measures in Melaka City

City-to-City Knowledge Exchange

Session 1

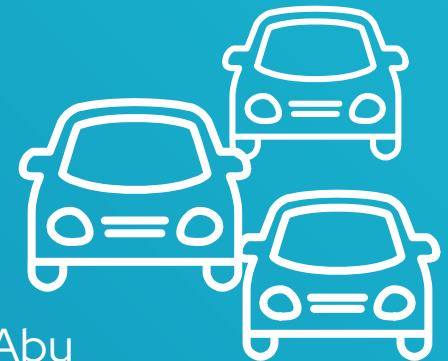
5th August 2021 (Thursday)

Speaker:

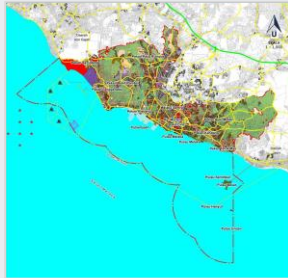
YBhg. Datuk Zainal Bin Haji Abu

Mayor

Melaka Historic City Council



Melaka City at Glance



270.39 km²

Land area

Source:
MBMB Local Plan 2035



538,510

Population (2019)

Source:
MBMB Local Plan 2035



+2.7%

Population growth
per year

Source:
MBMB Local Plan 2035



>10,000

Cars entering city
centre daily (2016)

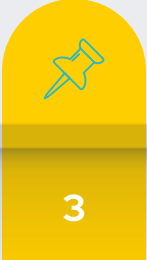
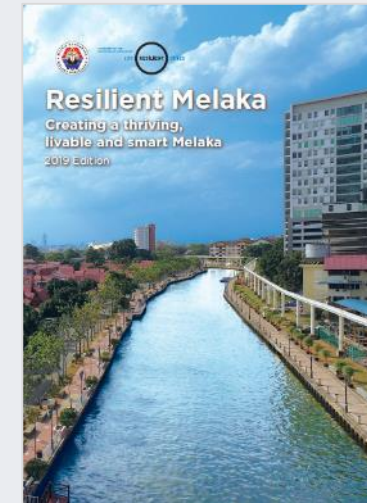
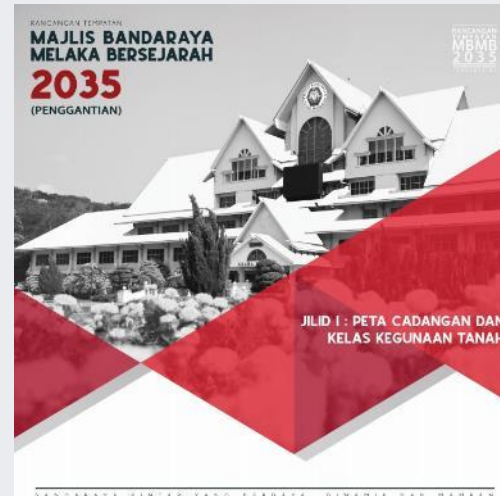
Source:
Traffic Impact Assessment
(Site Survey)





Melaka City at Glance

SUSTAINABLE DEVELOPMENT GOALS





Traffic Congestion

TRAFFIC CONGESTION IS A CONDITION:

Increase the use of road networks

Demand for road space exceeds supply

Slower speeds and longer trip times

WHY IT IS AN URBAN PROBLEM?

Population growth

Economy development

High volume of vehicles

Inadequate infrastructure

Surrounding development





Cause of Traffic Congestion in Melaka City

- Focal point for tourism activity
- Old building and road design
- Narrow road infrastructure
- Various activities at one city area

(School, shopping centre, residential, heritage trades, historical places and etc.)





GFCP Melaka Intervention 2: Heritage Area integrated Mobility Plan



**ITS And
Smart Technologies**



**EV Vehicle &
Infrastructure**



Park & Ride Facilities



**Automatic Number Plate
Recognition (ANPR)**



**Improve Non-Motorised
& Public Transportation**



**Provide Alternative
Transport**



**Integrated and Inclusive
Accessibility Plan**



Success Factors for the Heritage Area Integrated Mobility Plan



Maintain and Enhance the Outstanding Universal Values (OUVs) of the Site

Improving Tourist Offer

Reducing Air and Noise Pollution

Improving Accessibility

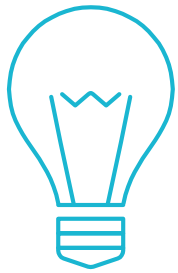
Improving Opportunity for GESI and Vulnerable Groups

Improving Safety & Security

Seamless mobility to, from and within the Heritage Area

MBMB Initiative

Mitigation Measures



1

SPIKTRA - M

2

SIPKA

3

PEDESTRIAN
WALKWAY

4

BICYCLE LANE





Introduction

- An issue for urban area and metropolitan cities across the world
- Ideally, there are 3 approaches can helps to reduce traffic congestion:
 - Improve road infrastructure
 - Promote public transportation while maintaining its facilities
 - Upgrade traffic management system aligned with traffic trends



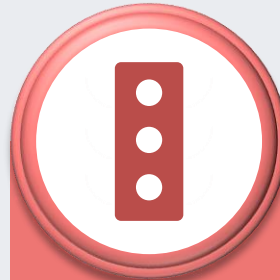
Objective



Reduce traffic congestion especially within MBMB critical area



Shorten vehicle waiting time



Increase the number of vehicle passing through traffic light



Automatic adjustment and time setting based on traffic trends



Wireless vehicle detection sensor (WWD)



AI Traffic Camera

Provide live information & detect:

- Accident
- Traffic congestion
- Vehicle classification
- Data collection

Integrated Green Wave Linking (IGWL)

Helps to:

- Reduce waiting time
- Improve effectiveness of traffic flows
- Reduce carbon emission



Spiktra - M



Phantom Zone

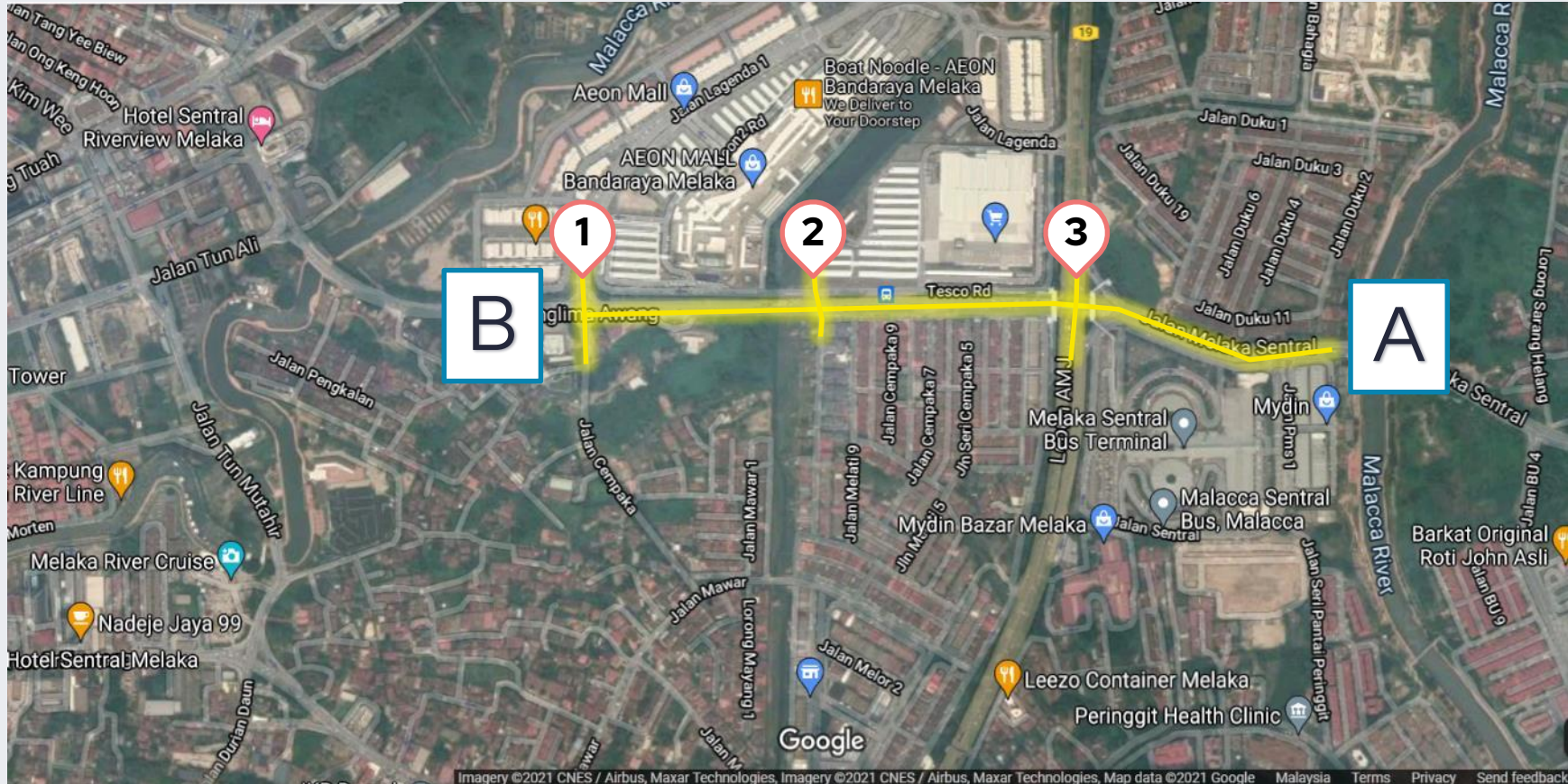
(Panglima Awang Zone)



Phantom Zone (Panglima Awang Zone)

Melaka Central Junction – Panglima Awang Junction

(850meters)



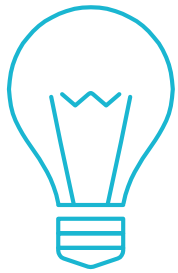


Survey Results

Points	A - B	B - A
Average Journey Time (Before)	3 min. 31 sec.	6 min. 11 sec.
Average Journey Time (After)	1 min. 5 sec.	1 min. 29 sec.
Reduction Journey Time	70%	78%
Efficiency	224%	316%

MBMB Initiative

Mitigation Measures



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Introduction

Automated Pedestrian System (*Sistem Pejalan Kaki Automatik/SIPKA*)

- To sense/detect when the pedestrian is waiting in detection zone
- Automatically send a signal to switch to a pedestrian walk phase
- Accurate guidance & suitable crossing time interval





Advantages

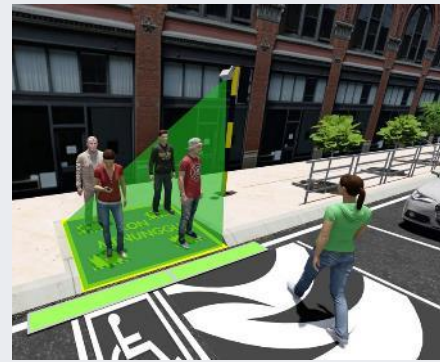


WPD As a Detector
Using infrared (IR) technology

User Friendly
Could help disabled pedestrian to cross roadway safely

Damage Trace
Trace through phone application

Heavy Duty
Expose to heat and water resistant with a lifespan for 10 years



Location





Video





MBMB is ready to lead the technology and technical field to meet industrial need which aligned with National Industry Revolution 4.0 by initiate the AI Traffic Camera, AI Traffic Management Software, WVD, WPD and etc.



20



Thank You



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