

NOMINATION FOR The Apec low-carbon model town
project 2017

SHAH ALAM CITY



1st Apec lcmt symposium Jakarta, Indonesia 2017

The background image shows a scenic view of the Shah Alam City Centre. In the foreground, a calm lake reflects the sky and the buildings. The city centre features several modern high-rise buildings with glass facades, interspersed with traditional Malaysian architecture characterized by blue roofs and white walls. A prominent white structure with a golden dome is visible on the right side of the lake. The sky is a clear, bright blue with some light clouds. The overall atmosphere is clean and modern.

Low carbon pilot project

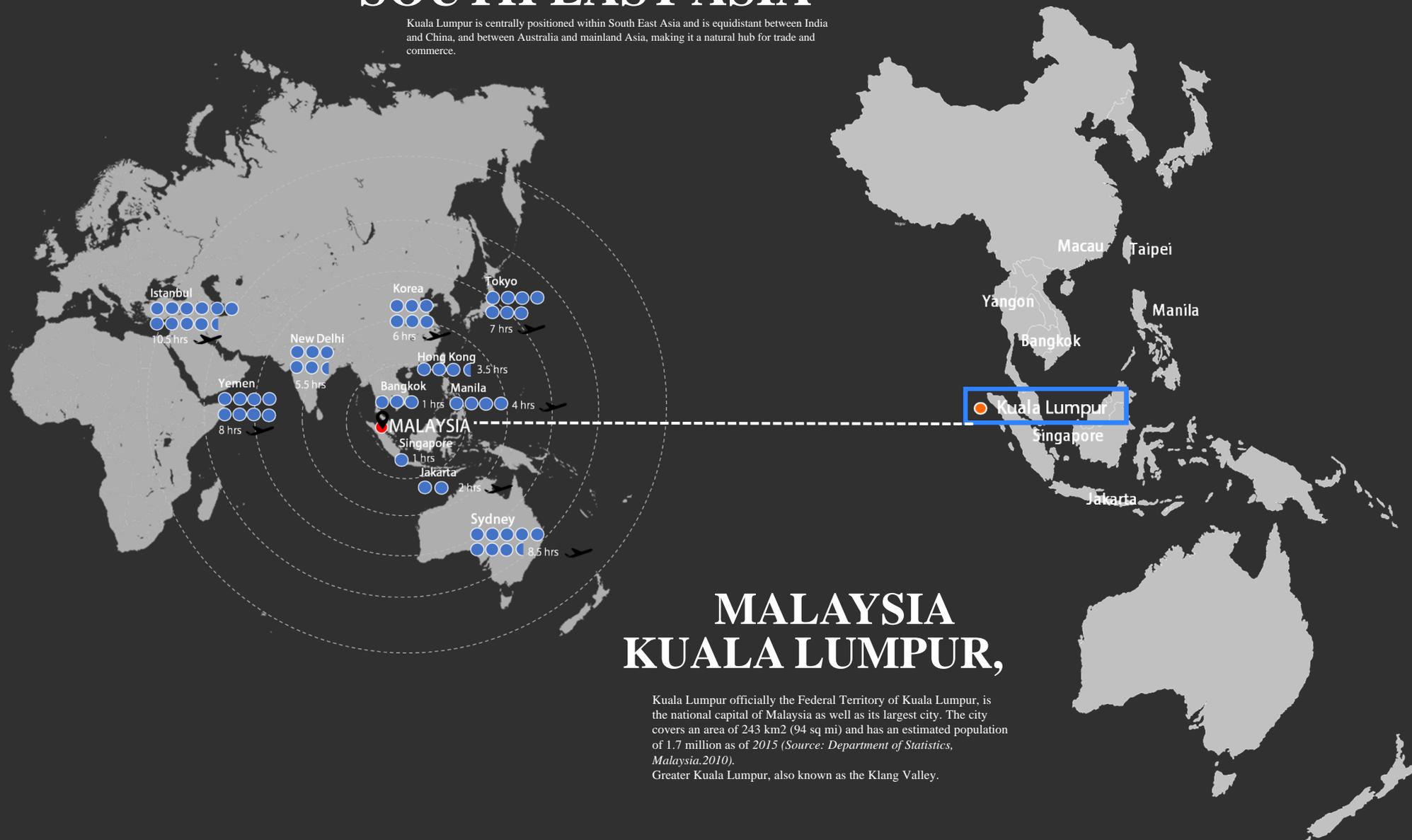
Shah Alam city centre - (section 14)

1.0 Introduction

1.1 THE SITING OF MALAYSIA, SELANGOR & SHAH ALAM

SOUTH EAST ASIA

Kuala Lumpur is centrally positioned within South East Asia and is equidistant between India and China, and between Australia and mainland Asia, making it a natural hub for trade and commerce.



MALAYSIA KUALA LUMPUR,

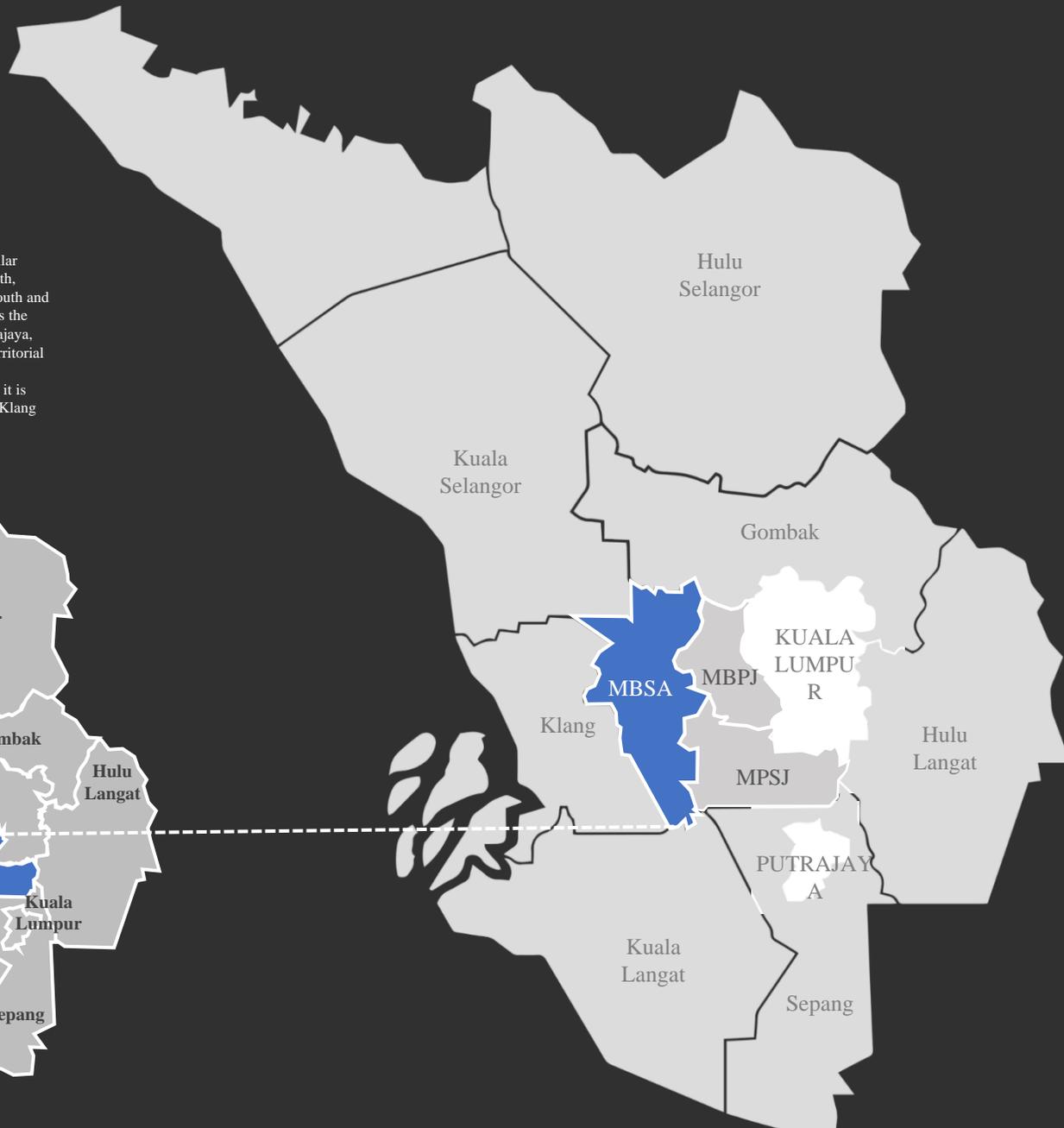
Kuala Lumpur officially the Federal Territory of Kuala Lumpur, is the national capital of Malaysia as well as its largest city. The city covers an area of 243 km² (94 sq mi) and has an estimated population of 1.7 million as of 2015 (Source: Department of Statistics, Malaysia.2010). Greater Kuala Lumpur, also known as the Klang Valley.



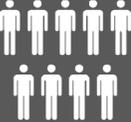
SELANGOR

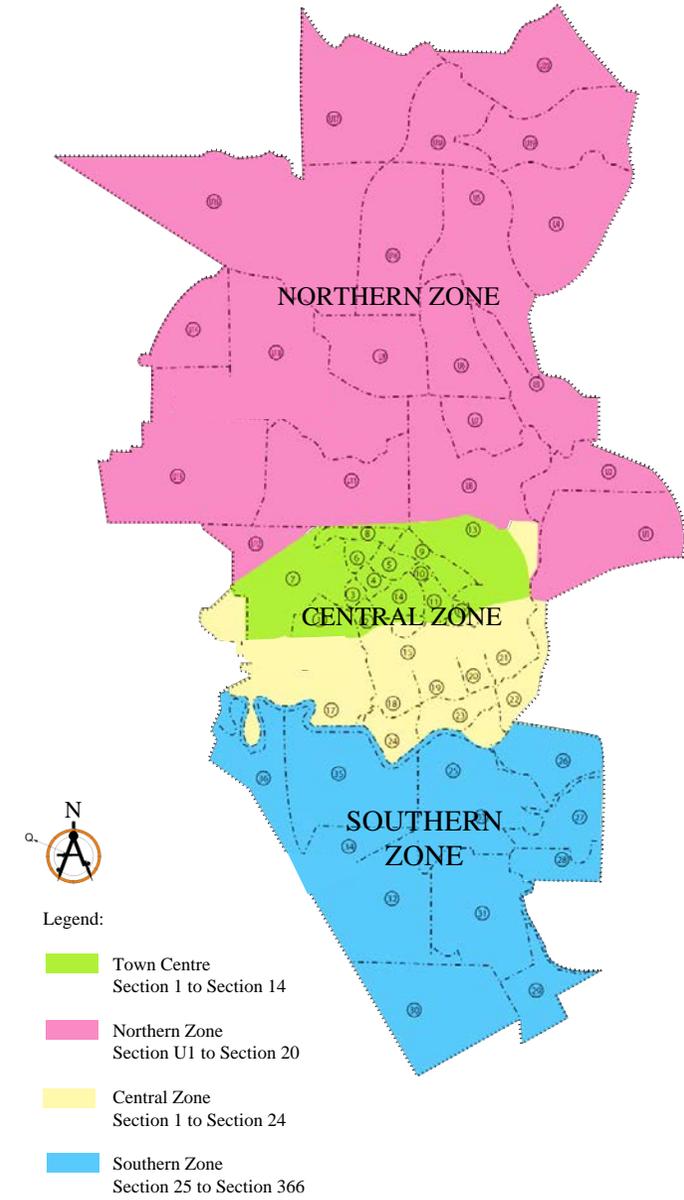
Selangor located at the west coast of Peninsular Malaysia and is bordered by Perak to the north, Pahang to the east, Negeri Sembilan to the south and the Strait of Malacca to the west. It surrounds the federal territories of Kuala Lumpur and Putrajaya, both of which were once under Selangor's territorial sovereignty. The state capital is Shah Alam. Selangor has the largest city in Malaysia and it is growing rapidly due to modernisation in the Klang Valley.

PETALING, SHAH ALAM



1.2 BACKGROUND OF SHAH ALAM, SELANGOR

 <p>AREA: 290.3 SQKM (29030 Ha)</p>	 <p>OFFICIAL FLOWER : Orchid – RENANTANDA SHAH ALAM</p>
 <p>DISTRICT : Petaling District and Part of Klang</p>	 <p>RECREATION AREA / GREEN: 84,673 Hectar</p>
 <p>POPULATION: 635,550 People (2016)</p>	 <p>NUMBER OF RIVER 9</p>
 <p>NUMBER OF PROPERTY OWNERS: 218,079 (2015)</p>	 <p>NUMBER OF VILLAGE 17</p>
 <p>TAX INCOME : RM434,406,160 (2016)</p>	 <p>BRANCH OFFICE 3 Branches</p>
 <p>SECTION: 56 Seksyen</p>	



1.3

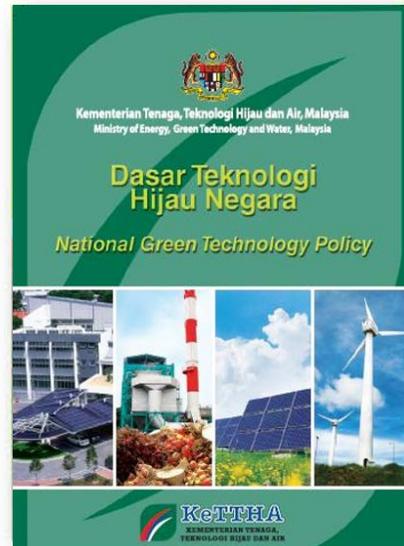
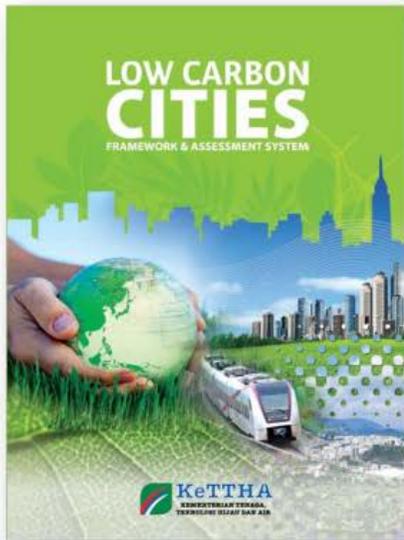
LOW CARBON PILOT PROJECT, SECTION 14, SHAH ALAM

GREEN CONSTRUCTION GUIDELINES

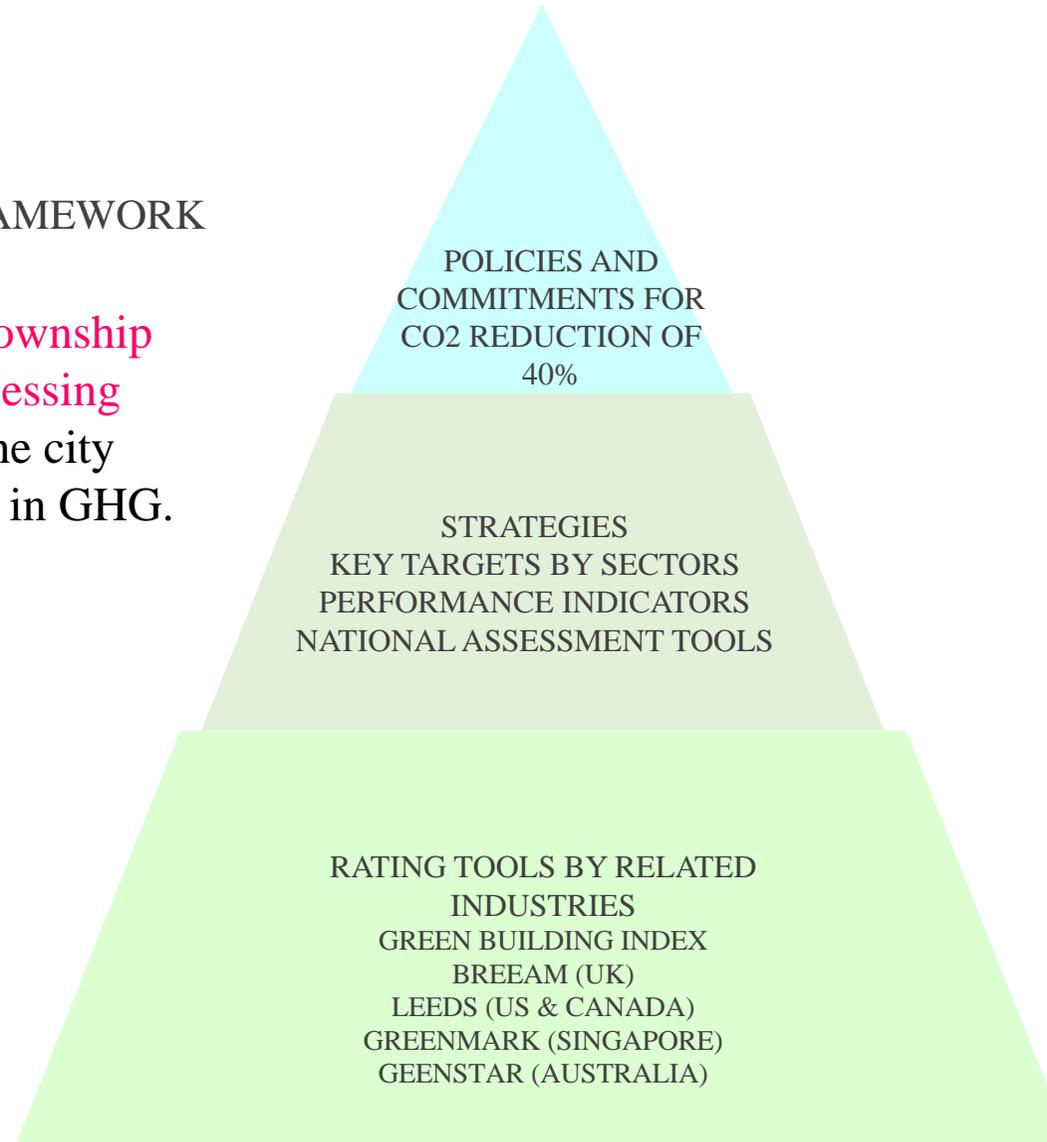


REGIONAL CONTEXT- MALAYSIA LOW CARBON CITY FRAMEWORK

This document is to assist local authorities, township developers, planners and individuals in assessing whether developments carried out within the city contributes towards the reduction or decrease in GHG.



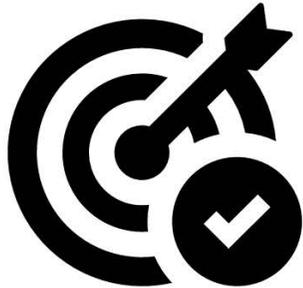
Launched on 8 Sept 2011



PURPOSE OF LCCF & ASSESSMENT SYSTEM

✔ TO GUIDE STAKEHOLDERS TO LEAD BY EXAMPLE & IMPLEMENT LOW CARBON CITIES EFFORT

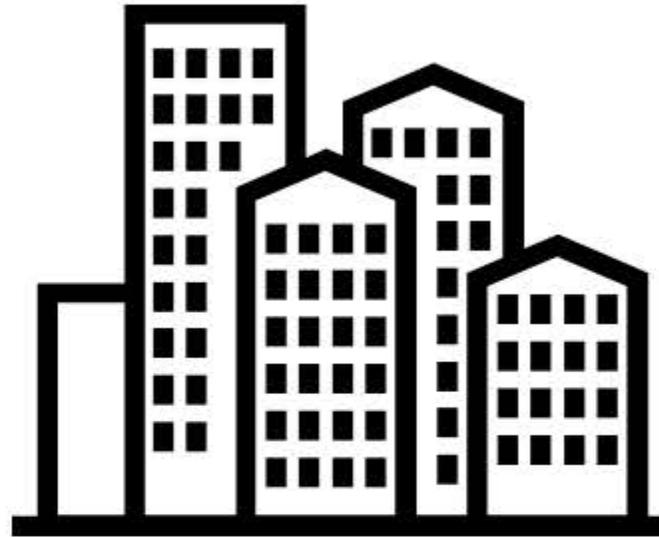
Objective
(Main Purpose)



LCCF

- ✔ To encourage & promote the concept of low carbon cities and townships in Malaysia.
- ✔ To increase the compatibility of cities/townships with their local natural system.
- ✔ To guide cities in making choice/decisions towards greener solutions.

User
(Implementation)



CITIES/TOWN

- ✔ All cities & Township in Malaysia
(Municipalities, Developers, Universities)

Target
(Carbon Emission)



CO2

- ✔ To reduce carbon emission intensity by 45% per GDP per capita by the year of 2030

LOCAL CONTEXT- SHAH ALAM LOW CARBON ACTION PLAN 2030

GREEN TECHNOLOGY ACTION PLAN SELANGOR STATE 2016-2018

- ✓ Low Carbon Framework Measurement

2020

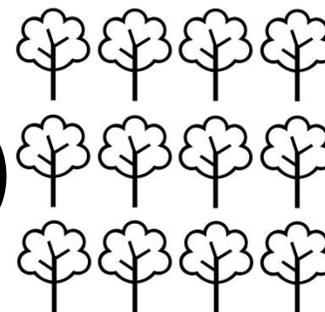
12 Local Authority are using LCCF



- ✓ Increase City Sustainability

2030

4 main city to be the Green City



- ✓ Green Turnover

5%
a year



- ✓ Public Transportation

69%

Fuel cost reduction and maintenance

- ✓ Green Building (Green Assessment)

30%-50%

Electricity power reduction

&70%

Power saving due to LED



Note :

This target are based on Green Technology Action Plan Selangor State 2016-2018.

1.4 LOCAL CONTEXT- SHAH ALAM GREEN BUDGET

FEDERAL



✓ Green Audit
RM **55,000**
MBSA Building (2017)
(USD 13,000)

✓ Green Server Room
RM **60,000**
(2017)
(USD 14,000)

Federal Level

STATE

✓ Capacity Building Program
RM **120,000**
SPAH, Solar (2016)
(USD 28,000)

✓ LCCF Program
RM **120,000**
Capacity Building (2017)
(USD 28,000)

State Level

MBSA

✓ MBSA
RM **7,234,300**
(2016)

✓ MBSA
RM **9,480,785**
(2017)

MBSA Level

(USD 1,700,000)

(USD 2,200,000)

Low Carbon Pilot Project

Shah Alam city centre - (section 14)

2.0 LOW CARBON CITY FRAMEWORK MALAYSIA (LCCE)



4 ELEMENTS FOR GHG REDUCTIONS IN CITIES AND TOWNSHIPS

CODE : UE

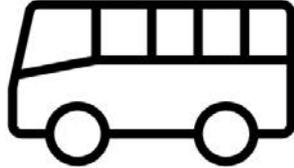


URBAN ENVIRONMENT

ENVIRONMENT

- 1 Site Selection
- 2 Urban Form
- 3 Urban Greenery & Air Quality

CODE : UT

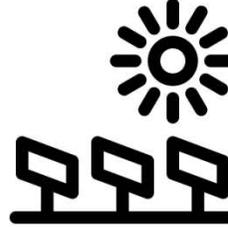


URBAN TRANSPORTATION

TRANSPORTATION

- 1 Shift of Transport Mode
- 2 Green Transport Infrastructure
- 3 Green Vehicles
- 4 Traffic Management

CODE : UI

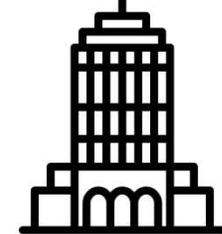


URBAN INFRASTRUCTURE

INFRASTRUCTURE

- 1 Infrastructure Provision
- 2 Waste
- 3 Energy
- 4 Water

CODE : B



URBAN BUILDINGS

- 1 Low Carbon Building
- 2 Community Service

© LCCSC MIP © MALAYSIAN INSTITUTE OF PLANNERS

4

Elements Contribute to GHG Emission



13

Performance Criteria*



35

Sub-Criteria

Performance Criteria are **measurable strategies to reduce carbon emission through:-**

Policy control, technological dev., better process & product management, change in procurement system, carbon capture, consumption strategies & others.

2.0 SHAH ALAM CITY CENTRE PERFORMANCE CRITERIA SELECTED

PERFORMANCE CRITERIA SELECTED

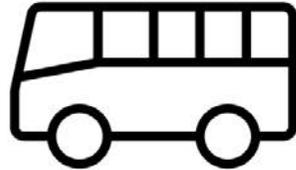
CODE : UE



URBAN ENVIRONMENT

Site Selection	1-1, 1-2
Urban Form	2-1, 2-2, 2-3, 3-4, 2-5, 2-6
Urban Greenery & Air Quality	3-1, 3-2, 3-3

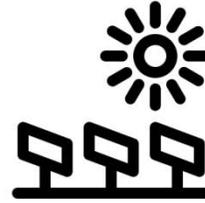
CODE : UT



URBAN TRANSPORTATION

Shift of Transport Mode	
Green Transport Infrastructure	2-1, 2-2
Green Vehicles	3-1, 3-2
Traffic Management	4-1, 4-2

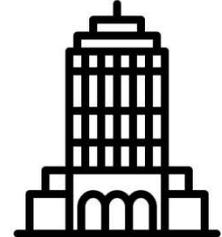
CODE : UI



URBAN INFRASTRUCTURE

Infrastructure Provision	
Waste	2-2
Energy	
Water	

CODE : B



BUILDINGS

Low Carbon Building	1-1, 1-2, 1-3, 1-4
Community Service	2-1

CITY BASED APPROACH

MBSA LCCF APPROACH



SHAH ALAM CITY CENTRE BASELINE YEAR ASSESSMENT : RESULT

MBSA has selected the following year as the baseline year and final year :-

Interim Year
2017



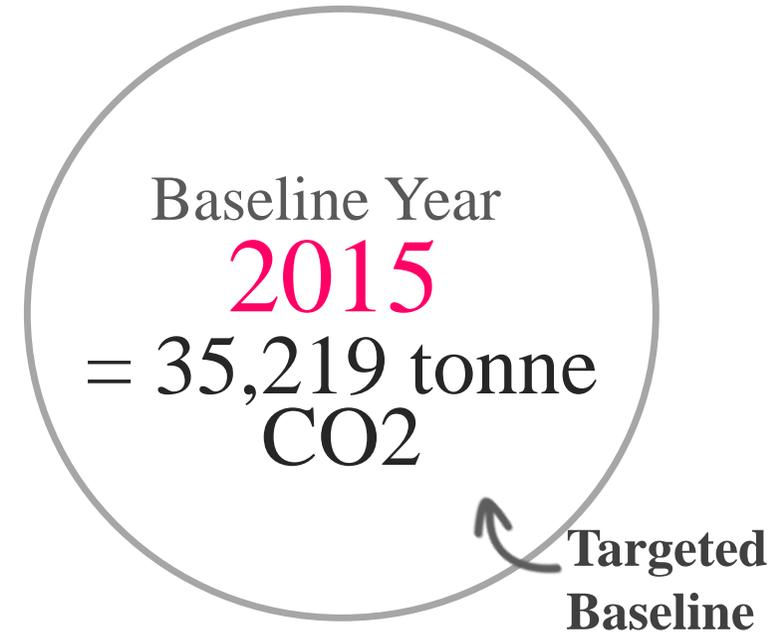
(Target min 3% yearly)

Final Year
2017



= Total reduction
-ve
Percentage reduction
zero

Total overall recorded carbon emission based on data collection by MBSA is :-



Low Carbon Pilot Project

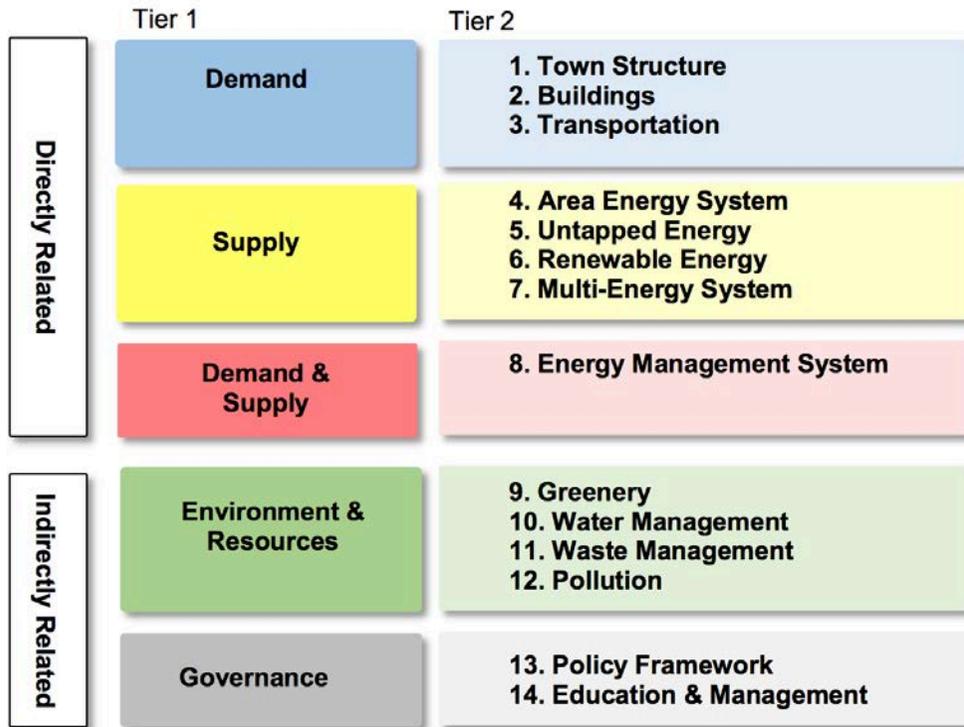
Shah Alam city centre - (section 14)

LCCF (MALAYSIA) VS LCTI (APEC)



LCTI System (APEC) VS LCCF (Malaysia)

LCTI SYSTEM



4

LCCF

1 URBAN ENVIRONMENT

- 1 Site Selection
- 2 Urban Form
- 3 Urban Greenery & Air Quality

2 URBAN TRANSPORTATION

- 1 Shift of Transport Mode
- 2 Green Transport Infrastructure
- 3 Green Vehicles
- 4 Traffic Management

3 URBAN INFRASTRUCTURE

- 1 Infrastructure Provision
- 2 Waste
- 3 Energy
- 4 Water

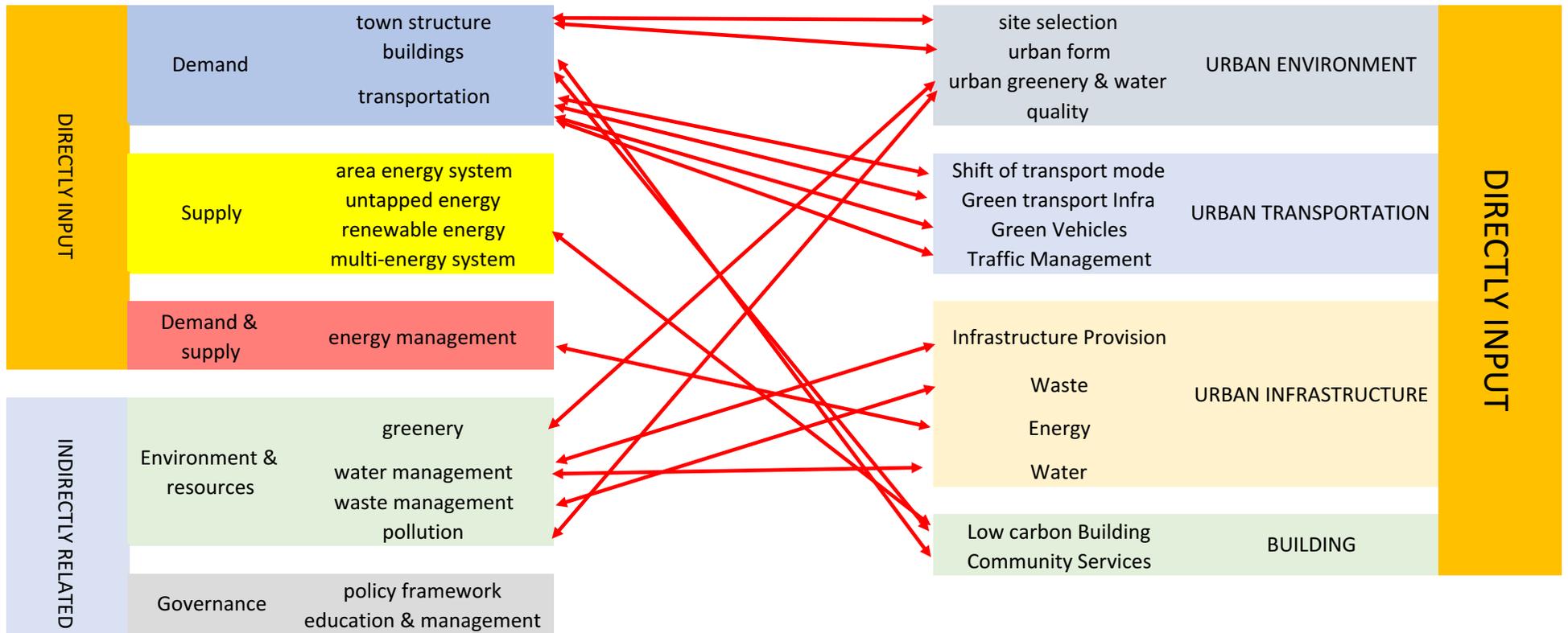
4 BUILDING

- 1 Low Carbon Building
- 2 Community Service

LCTI SYSTEM

VS

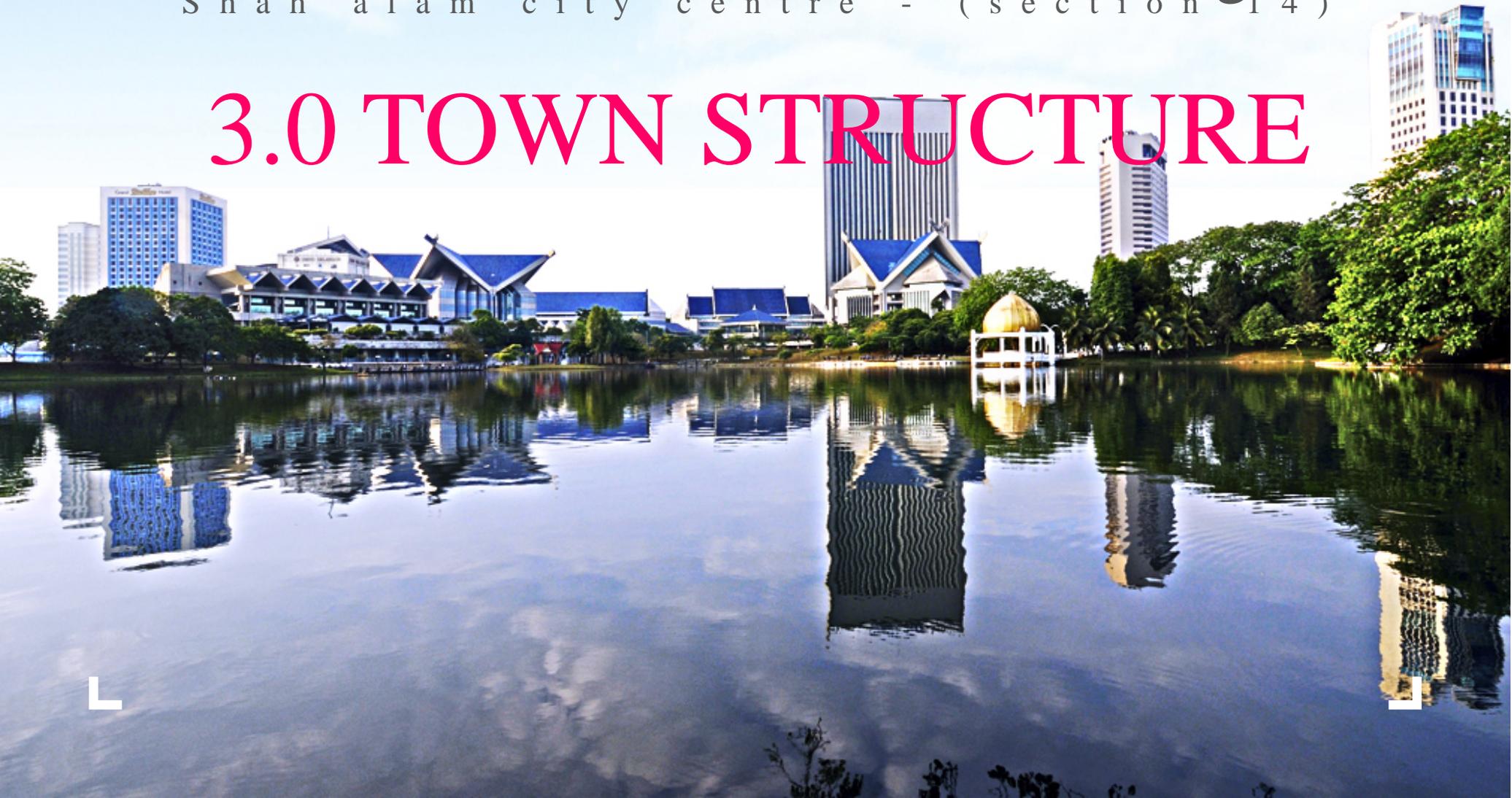
LCCF



Low Carbon Pilot Project

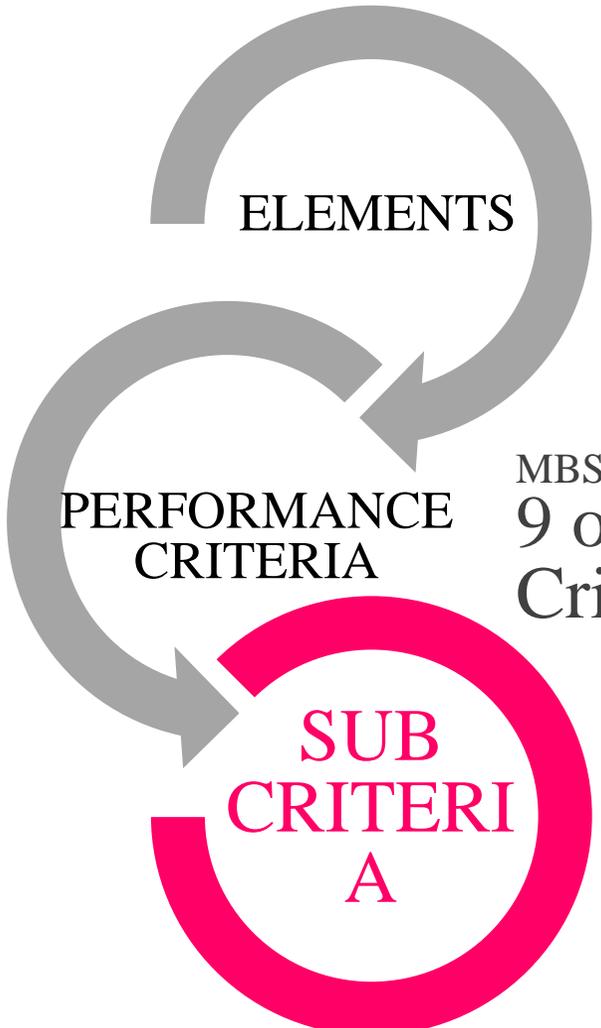
Shah Alam city centre - (section 14)

3.0 TOWN STRUCTURE



**SHAH ALAM SECTION 14 CITY
CENTRE
APPLICATION OF THE LCCF TOOLS**

Application of the LCCF Tools



ELEMENTS

MBSA applied
4 out of 4 LCCF elements (100%)

**PERFORMANCE
CRITERIA**

MBSA applied
9 out of 13 LCCF Performance
Criteria (69%)

**SUB
CRITERIA
A**

MBSA applied
30 out of 35 LCCF Sub Criteria (86%)

2.1 LOW CARBON PILOT PROJECT, SECTION 14, SHAH ALAM

TOWN STRUCTURE

SECTION 14, SHAH ALAM



BUILDING

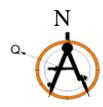
Overall = 29 buildings
 - Measurement in 2015 12 buildings
 - Measurement in 2016 25 units buildings
 Water : all according to categories: residences, industrial, Government and House of worship

1 WISMA MBSA	16 SACC MALL	27 PLAZA PERABOT
2 MUZIUM SULTAN ALAM SHAH	17 SHAH ALAM CONVENTION CENTRE	28 VISTA ALAM
3 MASJID SULTAN SALAHUDDIN ABDUL AZIZ SHAH	18 PLAZA ANGGERIK	29 PEJABAT POS
4 BANGUNAN DARUL EHSAN	19 MAYBANK	30 TAMAN REKREASI FERMAI
5 DATARAN SHAH ALAM	20 AFFIN BANK	31 TAMAN REKREASI INDAH
6 PLAZA ALAM SENTRAL	21 BANGUNAN UMNO SELANGOR	32 TAMAN REKREASI RAJA LUMU
7 MENARA MRCE	22 HOTEL GRAND BLUE WAVE	33 HOTEL QUALITY
8 SURUHANJAYA SYARIKAT MALAYSIA	23 JABATAN AUDIT NEGARA NEGERI SELANGOR	34 LAMAN BUDAYA
9 KOMPLEKS PEJABAT (DALAM PEMBINAAN)	24 TEATER DIRAJA SELANGOR	35 HENTIAN PUSAT BANDAR
10 BANK NEGARA (SHAH ALAM)	25 WISMA PKPS	36 GALERI SHAH ALAM
11 DATARAN KEMERDEKAAN SHAH ALAM	26 DEMC SPECIALIST HOSPITAL	37 PUSAT INFORMASI TOURISM SELANGOR
12 PLAZA PERANGSANG	27 PLAZA AZALEA	38 WET WORLD
13 KOMPLEKS PKNS	28 DEWI INTERNATIONAL SCHOOL	

- ✓ MBSA has embarked on LCCF process and implementation for Section 14, Shah Alam based on the selected LCCF elements and criteria's in 2015. Total Landuse = 335,702.70m²
- ✓ The area has been selected as the pilot implementation area for the pioneering LCCF application located at MBSA
- ✓ Ratio Residential use Residential (SOHO) = 148,675.78 Commercial Building = 252,182.54 **59%**

Legend:

- Institution
- Commercial
- Open Space
- Pond
- Transport Hub
- Future Development



TRANSIT ORIENTED DEVELOPMENT

**30% using
public transport**

**10 electric buses + 3 Park
& ride by 2020**

**50% provided with
bicycle + pedestrian**

**1 Bus terminal
In City Centre**

**10 central parking facilities
provided outside town
centre to give better facilities
for movement into the town
centre**

Low Carbon Pilot Project

Shah Alam city centre - (section 14)

4.0 BUILDING



3.0 SHAH ALAM CITY CENTRE

BUILDING MEASUREMENT LCCF FOR SHAH ALAM CITY CENTRE

MEASUREMENT LCCF FOR SHAH ALAM CITY CENTRE

Year of 2015

Total Number of Building

12 units (41.4%)

OUT OF 29



Government Building

- 1 Wisma MBSA
- 2 Muzium Sultan Alam Shah
- 3 Wisma PKPS
- 4 Jabatan Audit Negara, Negeri Selangor
- 5 Bangunan UMNO Selangor



Commercial Building

- 1 Bangunan Affin Bank
- 2 Plaza Perangsang
- 3 Kompleks PKNS
- 4 SACC Mall



Public Facilities

- 1 Sekolah Antarabangsa Dwi Emas
- 2 Hentian Pusat Bandar
- 3 Masjid Sultan Salahuddin Abdul Aziz Shah

SHAH ALAM CITY CENTRE

BUILDING MEASUREMENT LCCF FOR SHAH ALAM CITY CENTRE

MEASUREMENT LCCF FOR SHAH ALAM CITY CENTRE

Total Number of Building

25 units (86.2%)

Year of **2016**

OUT OF 29



Government Building

- 1 Wisma MBSA
- 2 Muzium Sultan Alam Shah
- 3 Wisma PKPS
- 4 Jabatan Audit Negara, Negeri Selangor
- 5 UMNO Selangor
- 6 Galeri Shah Alam
- 7 Laman Budaya
- 8 Bangunan Darul Ehsan
- 9 Pejabat Pos Shah Alam
- 10 Teater Shah Alam



Commercial Building

- 1 Affin Bank
- 2 Plaza Perangsang
- 3 Kompleks PKNS
- 4 SACC Mall
- 5 SACC Convention Centre
- 6 MRCB
- 7 Hotel Bluewave Shah Alam
- 8 Anggerik Mall
- 9 Plaza Alam Sentral
- 10 Plaza Perabot
- 11 Maybank



Public Facilities

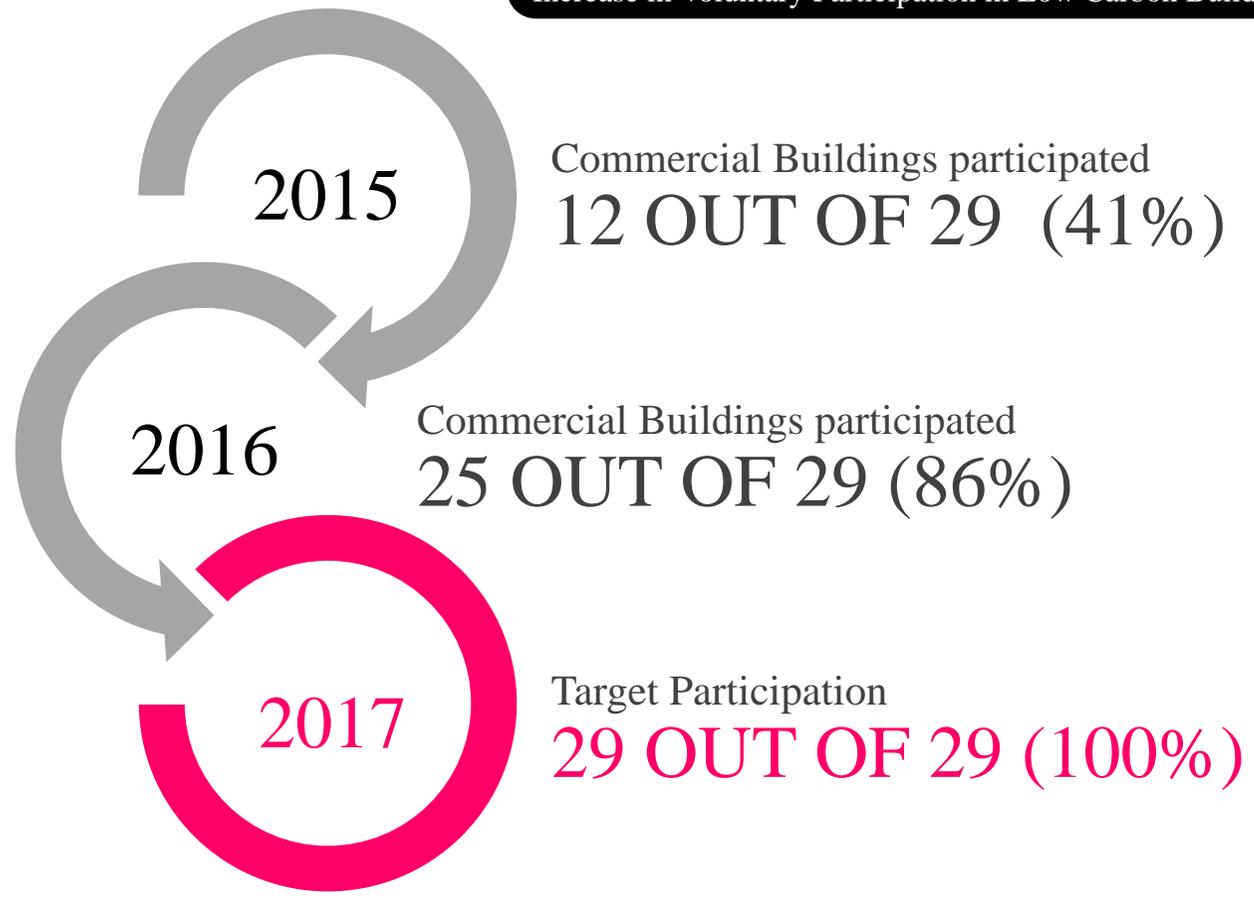
- 1 Sekolah Antarabangsa Dwi Emas
- 2 Hentian Pusat Bandar
- 3 Masjid Sultan Salahuddin Abdul Aziz Shah
- 4 DEMC

WAY FORWARD

SHAH ALAM SECTION 14 CITY CENTRE

LOW CARBON BUILDING ASSESSMENT

Increase in Voluntary Participation in Low Carbon Building Assessment



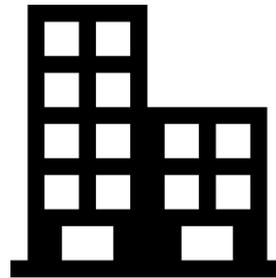
WAY FORWARD
SHAH ALAM CITY CENTRE
LOW CARBON BUILDING AWARDS

**GOVERNMENT
CATEGORY**



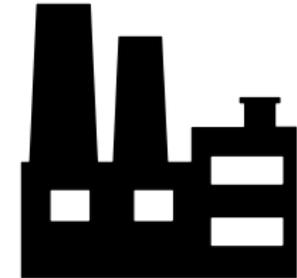
First Place Prize : RM 3K
Second Place Prize : RM 2 K
Third Place Prize : RM 1K

**COMMERCIAL
CATEGORY**



First Place Prize : RM 3K
Second Place Prize : RM 2 K
Third Place Prize : RM 1K

**INDUSTRIAL
CATEGORY**



First Place Prize : RM 3K
Second Place Prize : RM 2 K
Third Place Prize : RM 1K



...Encourage Participation
of Building Owners in Low
Carbon Building
Assessments are through ...

**LOW CARBON
BUILDING AWARDS**

1. AREA ENERGY



MBSA BUILDING AUDIT

Total gross floor area (GFA)
101,988.11 sqm

Total net floor area (NFA)
64,161.85 sqm

PRELIMINARY ENERGY AUDIT

- ✓ On-site survey and data collection
Within 3 weeks duration (from week-2 to week-4) – Jan 2017
- ✓ Objective:
 - i. To analyse energy performance
 - ii. To identify potential of no cost and low cost saving measures



BUILDING LOCATION

- ✓ GPS Coordinates:

Decimal degrees (DD)
Latitude : 3.07369
Longitude : 101.51945999999998

Degrees, minutes, seconds (DMS)
Latitude : N 3° 4' 25.284"
Longitude : E 101° 31' 10.055"

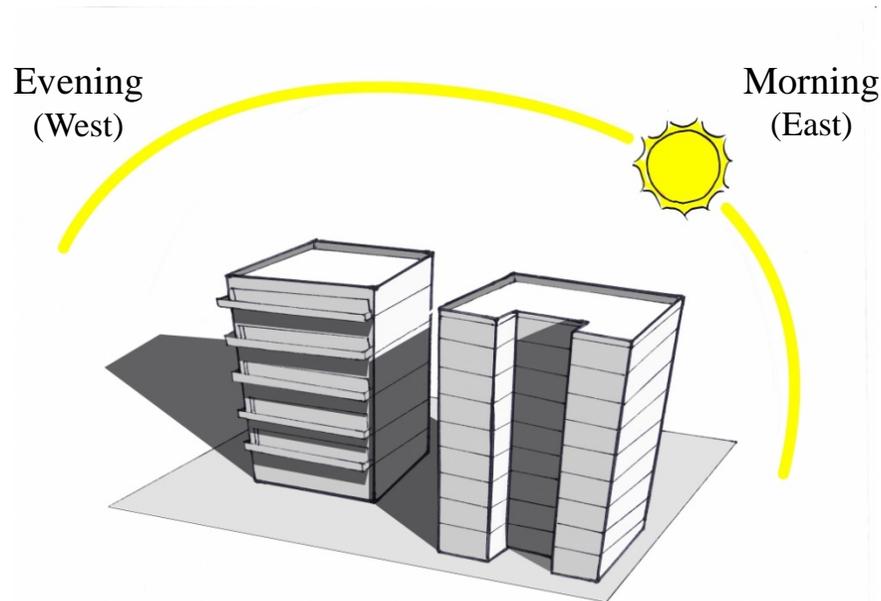
MBSA BUILDING AUDIT CRITERIA

BUILDING ORIENTATION

- ✓ Sun Path Study:
 - Wisma MBSA facing South
 - (Front and rear) not expose to the direct sunlight
- ✓ Benefit:
 - Minimise building cooling demand

BUILDING DESIGN

- ✓ GPS Coordinates:
 - Decimal degrees (DD)
Latitude : 3.07369
Longitude : 101.51945999999998
 - Degrees, minutes, seconds (DMS)
Latitude : N 3° 4' 25.284"
Longitude : E 101° 31' 10.055"



BUILDING DESIGN

- ✔ Block direct sunlight goes into the building
- ✔ Reduce heat penetration into the building
- ✔ Benefit:
Minimise building cooling demand



BUILDING DESIGN

- ✔ UNDERGROUND CAR PARK WITH OPENING OUTLET
 - Allow natural air ventilation
 - Minimise car park ventilation system usage
- ✔ Benefit:
Minimise building cooling demand

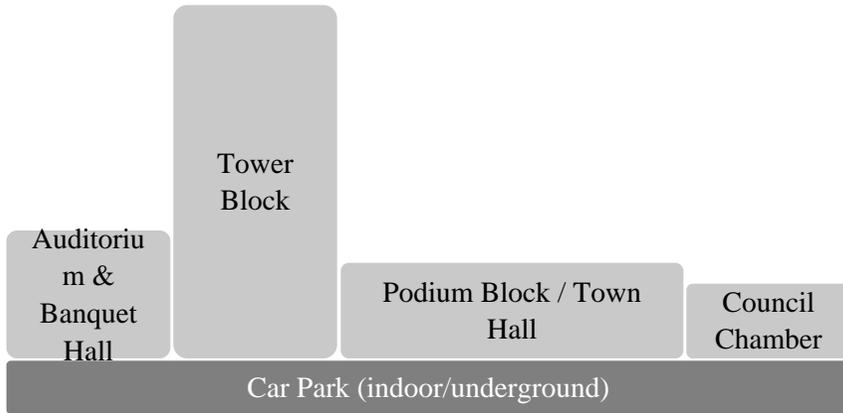


SCOPE AND BOUNDARIES

✓ Scope

i. Electricity

ii. Electricity for thermal energy (for chilled water supply by TNEC)



FINDINGS FOR IMPROVEMENT

- ✓ Electrical distribution system – (6)
- ✓ Air conditioning, mechanical,
- ✓ Ventilation (ACMV) system – (3)
- ✓ Lighting system – (5)
- ✓ Building conditions – (1)

15 Findings

IMPORTANT FOR EFFECTIVE ENERGY MANAGEMENT

OUR TARGET

31 TNB energy bills received every months

Match then reduce the numbers... MBSA need to collaborate with TNB

SEVERAL TNB energy meters (individual) in Tower block & Podium block

2. UNTAPED ENERGY

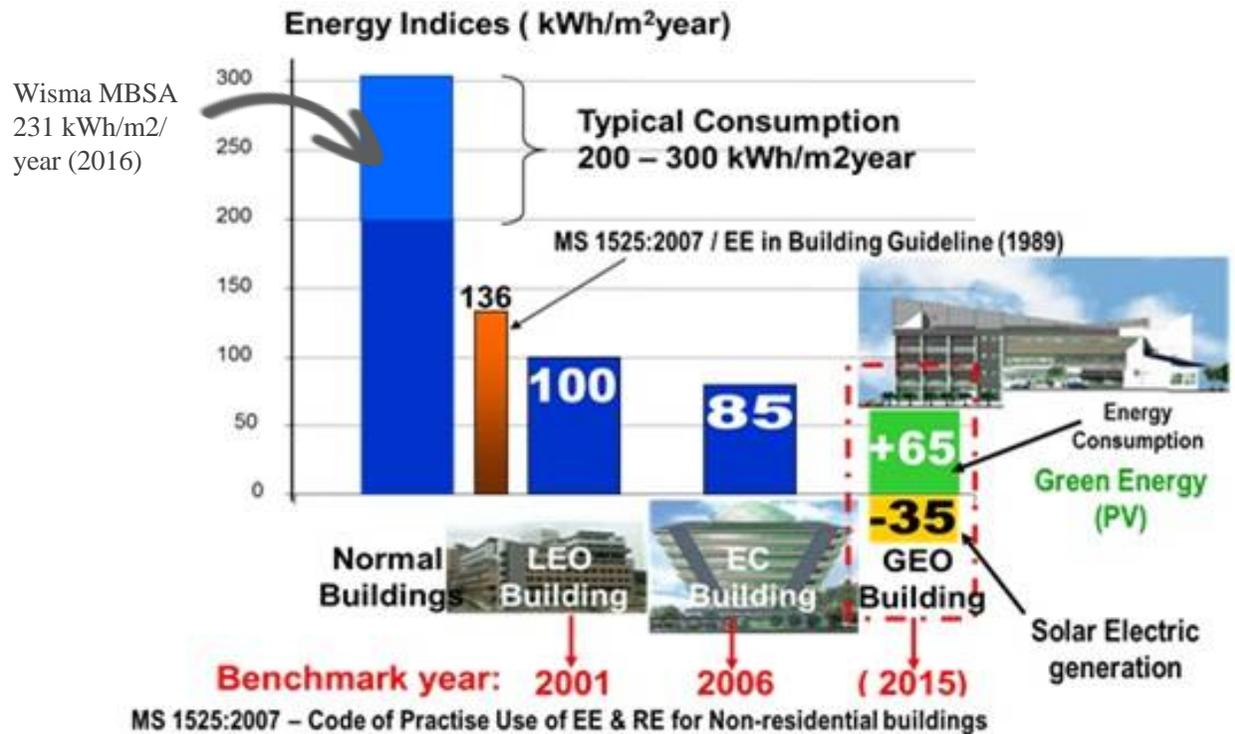
BUILDING CONDITION

✓ Energy waste

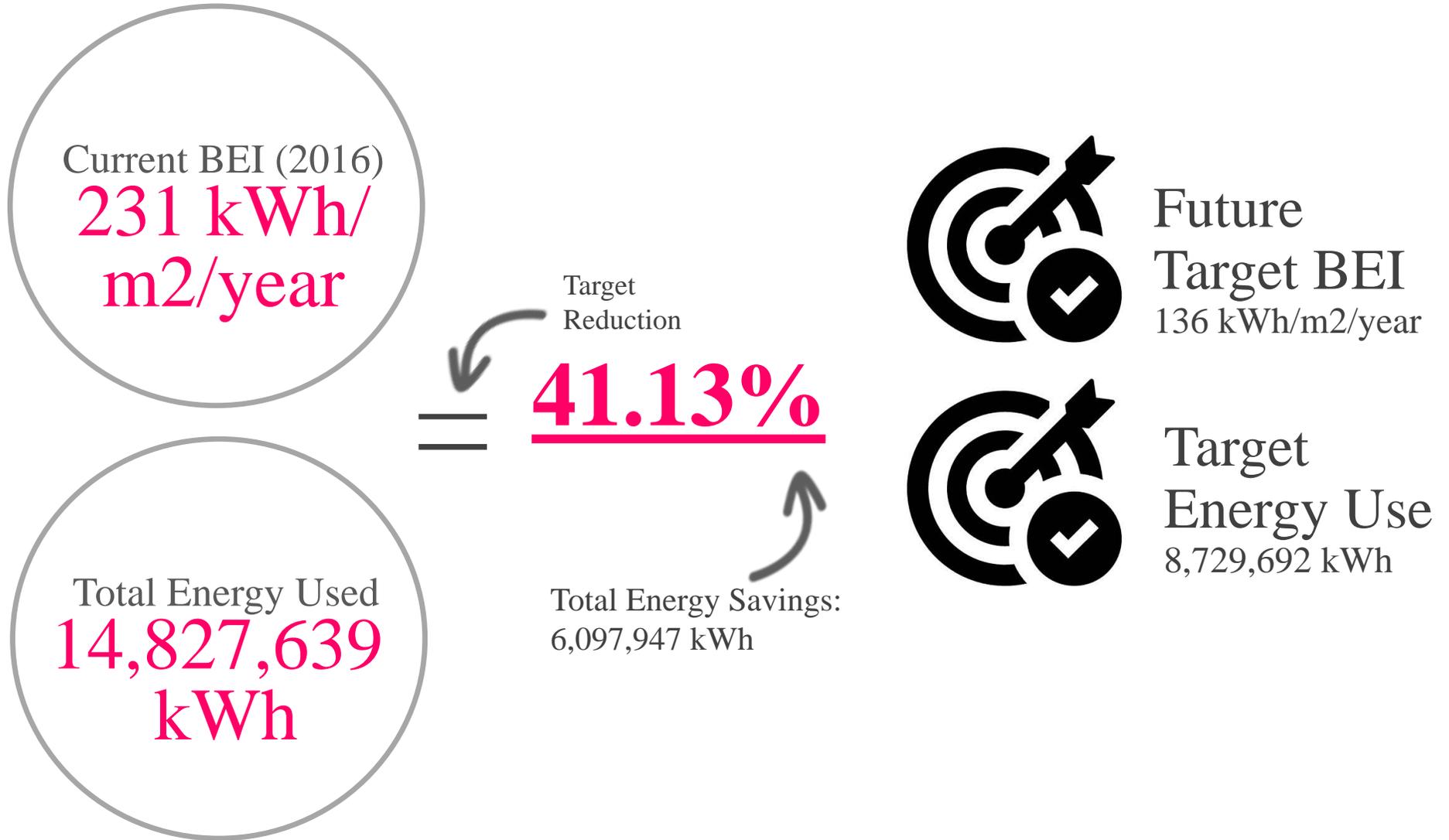


Please close
all doors
and windows
when air
conditioning
is on

BUILDING ENERGY INDEX (BEI)



MBSA BUILDING AUDIT CONCLUSION OF THE FINDINGS

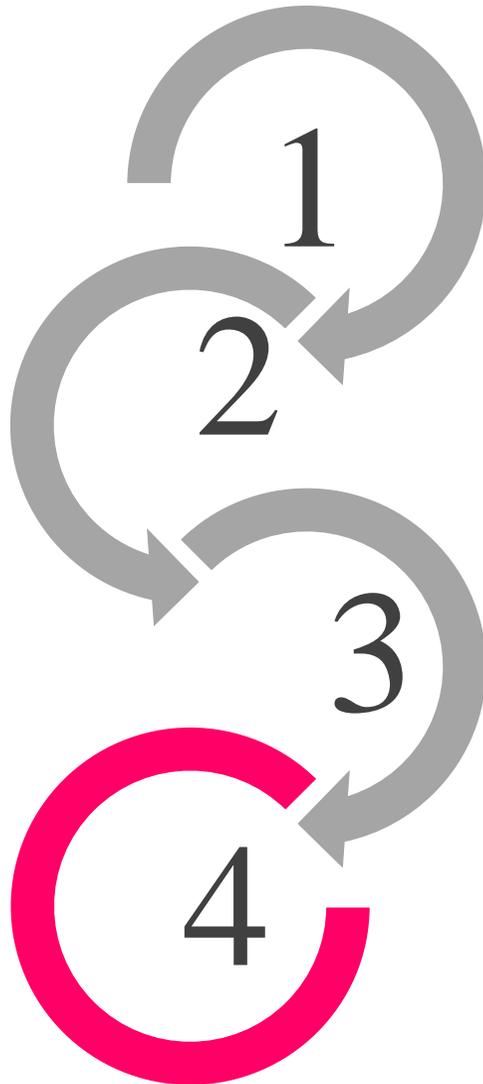


MBSA BUILDING AUDIT
ENERGY CONSERVATION MEASURES SAVINGS TARGET



Savings Target
5% - 15%

MBSA BUILDING AUDIT PROPOSED ENERGY CONSERVATION MEASURES



- ✓ **ENERGY TRAINING AND AWARENESS CAMPAIGN**
Continuous program for behaviour change process

- ✓ **LIGHTING CONTROL**
 - Using motion sensors - for emergency staircase
 - Awareness - Turn OFF the light when not in use
 - Re-lamping - based on recommendation lux in MS1525

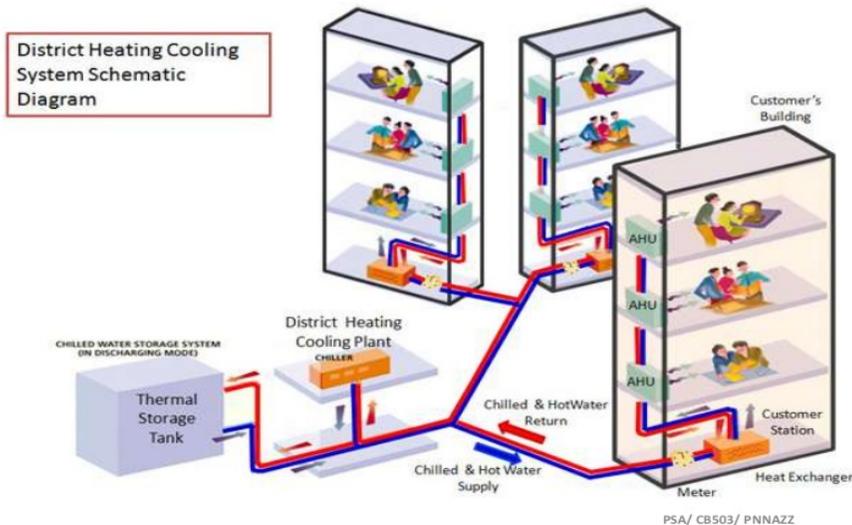
- ✓ **BUILDING COOLING DEMAND**
 - Install thermometer - awareness 24°C room temperature
 - Improve setting and condition of AHUs

- ✓ **BUILDING CONDITION**
 - Inspection and improve- building windows condition
 - Reduce energy waste (leakage) - for cooling demand

4. MULTI ENERGY SYSTEM

DISTRICT COOLING SYSTEM (DCS)

- ✓ Chilled water supply
- ✓ Thermal energy meter (Energy-3)
- ✓ Outsource: operate and maintain by TNEC
- ✓ Including AHUs and FCUs



- Usage of centralized cooling energy to MBSA Building, Banquet Hall and Auditorium MBSA, Shah Alam Theater and State Museum.
- Chilled water that will be distributed by underground insulated pipeline to all related buildings.

CHILLED WATER SUPPLY DATA

DESCRIPTION	REQUIRE TEMPERATURE
Supply chilled water	6 - 7 °C
Return chilled water	14 °C
Delta T	7 - 8 °C

ROOM COMFORT SURVEY FINDING

- ✓ UTM Researcher found the right temperature for office buildings
- ✓ The study suggested the thermal comfort zone is between 24°C to 25°C with relative humidity of 50% to 65%.



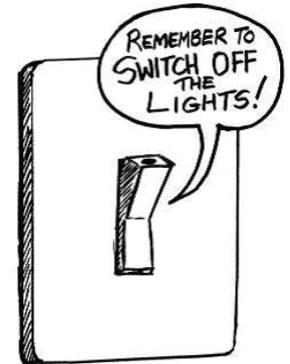
- ✓ Finding : Some of the office are cold or too cold

HOW TO ENSURE ROOM TEMPERATURE AT 24°C

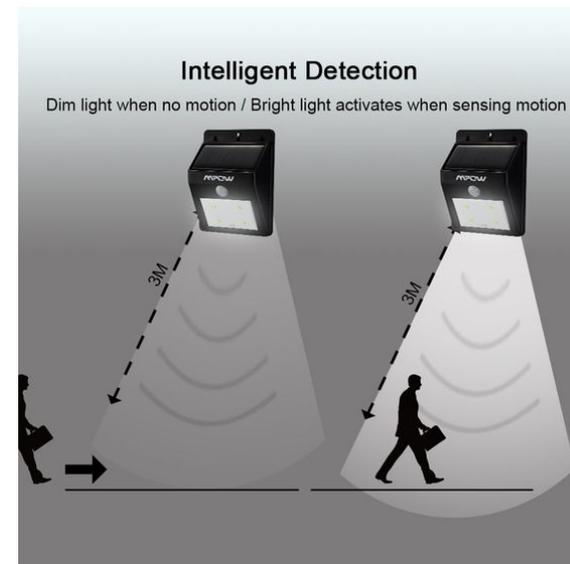
- ✔ Seeing is believing – encourage for behaviour change
- ✔ Install thermometer in the office room



LIGHTING FOR EMERGENCY STAIRCASE



- ✔ The best energy savings strategy for lighting
- ✔ Proposed using **MOTION SENSOR** for emergency staircase lighting due to the safety and security reasons



5. ENERGY MANAGEMENT SYSTEM

WAY FORWARD

SMART SENSOR CLOUD FOR MAJILIS BANDARAYA SHAH ALAM ENABLING SMARTER CITY DATA ACQUISITION AND ANALYSIS MANAGEMENT

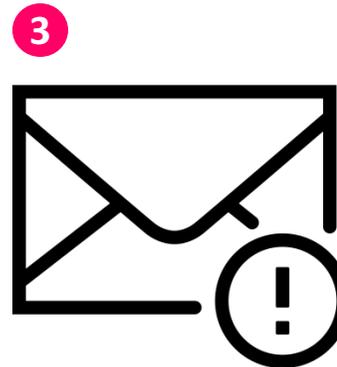
Issues And Challenges With Current Municipal Data Acquisition And Gathering



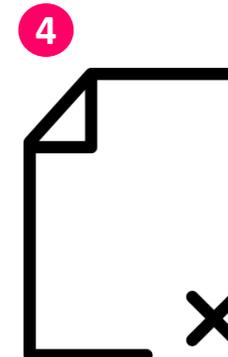
Manual data gathering process



Accuracy, reliability and integrity of data is dependent on human effort at the point of data gathering exercise



Ad-hoc data gathering and dependent on availability of personnel



Data acquisition and gathering is in silos and lack the ability to get across board data based on time certain parameters such as time / duration etc.



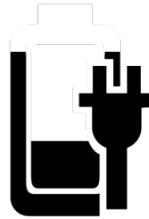
Unable to gather data at smaller time intervals to ensure meaning full interpretation and analysis can be made

SMART SENSOR CLOUD FOR MAJILIS BANDARAYA SHAH ALAM BATUTA™ CLOUD VALUE PROPOSITION



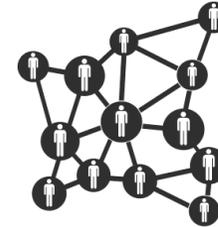
LONG RANGE

- ✓ Greater than cellular
- ✓ Deep indoor coverage
- ✓ Star topology



MAX LIFETIME

- ✓ Low power optimized
10-20 year lifetime
- ✓ >10x vs cellular m2m



MULTI-USAGE

- ✓ High capacity
- ✓ Multi-tenant
- ✓ Public network



LOW COST

- ✓ Minimal infrastructure
- ✓ Low cost end-node
- ✓ Open SW

OTHER LOW CARBON CITY PROJECTS
MBSA BUILDING MAINTENANCE



BUILDING ENERGY INDEX (BEI)

- BEI is used to make comparison of energy used by a certain building
- “Malaysia rating system and standard BEI” :-
 - a) 135 kWh/m²/year (commercial building)
 - b) 200-300 kWh/m²/year (normal building)
- The outcome from energy audit conducted through Kettha Grant from SEDA, MBSA Building is categorise as “normal building rating in term of building energy performance” with the total of 231 kWh/m²/year.
- The department proposed to save energy up to 40%
 - Current energy used = 14,827,639 kWh (231 kWh/m²/year)
 - Target energy used = 8,729,692 kWh (136 kWh/m²/year)

OTHER LOW CARBON CITY PROJECTS

MBSA BUILDING MAINTENANCE



Implemented Projects -Energy Saving Proposal Through (No Cost and Low Cost Saving)

- Training and Awareness Campaign
- Centralized Lighting Control (timer)
- Air condition with minimum temperature of 24°c.
- Reduce heat on building through building orientation that received less direct sunlight
- The air ventilation in parking area is through natural ventilation

Energy Saving Proposal

- Using motion sensor & timer to control lighting at lift lobby and toilet
- Recycling rain water through Rain Water Harvesting
- Air condition with controlled minimum temperature
- The usage of LED light

3. RENEWABLE ENERGY

OTHER LOW CARBON CITY PROJECTS MBSA BUILDING MAINTENANCE



Rainwater Harvesting (SPAHR) at Dewan Rafflesia Seksyen U16, Shah Alam



- The collected water is used for cleaning by the contractor

OTHER LOW CARBON CITY PROJECTS MBSA BUILDING MAINTENANCE



Rainwater Harvesting (SPAHR) at Dewan Tania Seksyen 31, Shah Alam



- The collected water is used for cleaning by the contractor

OTHER LOW CARBON CITY PROJECTS

MBSA BUILDING MAINTENANCE



Rainwater Harvesting (SPAH) and Solar Panel at Level 3 MBSA Building (Contribution from State Government)



- The collected water is used for watering plants



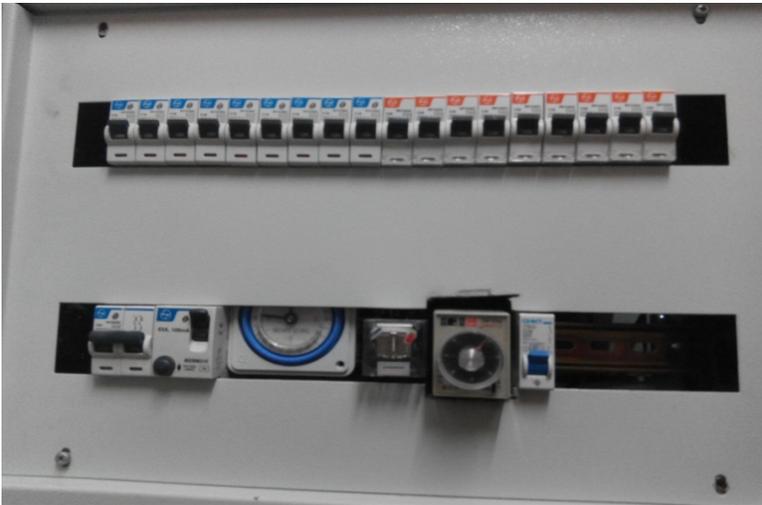
- Solar is used to distribute electric energy to the pump for the watering

OTHER LOW CARBON CITY PROJECTS MBSA BUILDING MAINTENANCE



Timer System

(Level 3, 8, 14, 15 , 16, 20, 22, 24, 25, 27 and 28)



- Timer on the following floor are set at 11pm, if there is still staff in the following floor during that hour, a button need to be pressed to extend the light to next 1 hour.

OTHER LOW CARBON CITY PROJECTS

MBSA BUILDING MAINTENANCE



Motion Sensor

(Level 3, 8, 14, 15 , 16, 20, 22, 24, 25, 27 and 28)



- LED light (down Light) with motion sensor were placed in the following floor, where the light will be automatically switch on if movement is detected.

OTHER LOW CARBON CITY PROJECTS
MBSA BUILDING MAINTENANCE



Solar Panel at Open Parking of MBSA Building.
(Upcoming and Planning)



Low Carbon Pilot Project

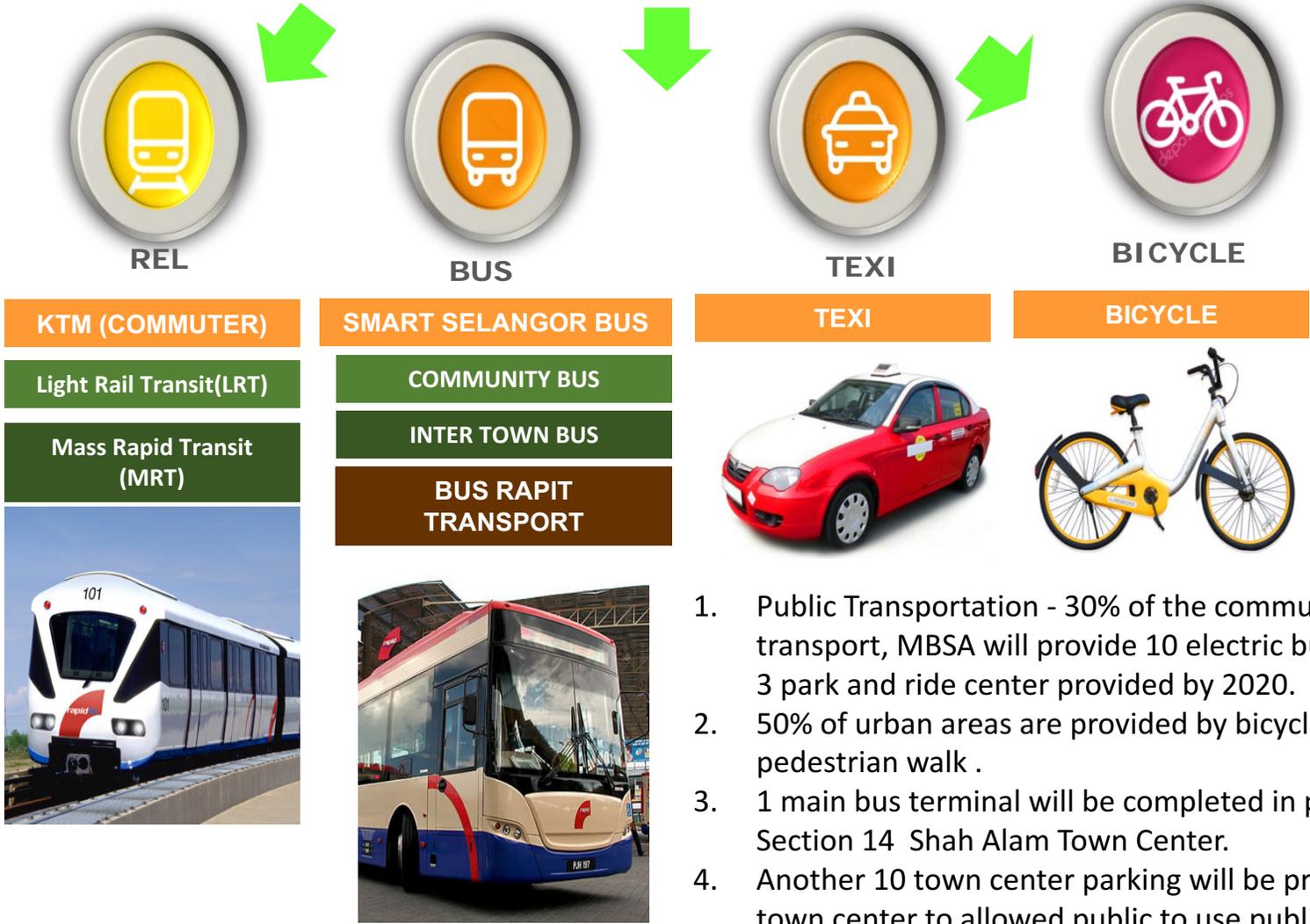
Shah Alam city centre - (section 14)

5.0 TRANSPORTATION



1. PROMOTION OF PUBLIC TRANSPORTATION

PUBLIC TRANSPORT IN SHAH ALAM



1. Public Transportation - 30% of the community use public transport, MBSA will provide 10 electric buses provided with 3 park and ride center provided by 2020.
2. 50% of urban areas are provided by bicycle lanes and pedestrian walk .
3. 1 main bus terminal will be completed in project area, Section 14 Shah Alam Town Center.
4. Another 10 town center parking will be provided outside the town center to allowed public to use public transport or walking in the town center area.

WAY FORWARD

SHAH ALAM TRANSPORTATION IN FUTURE



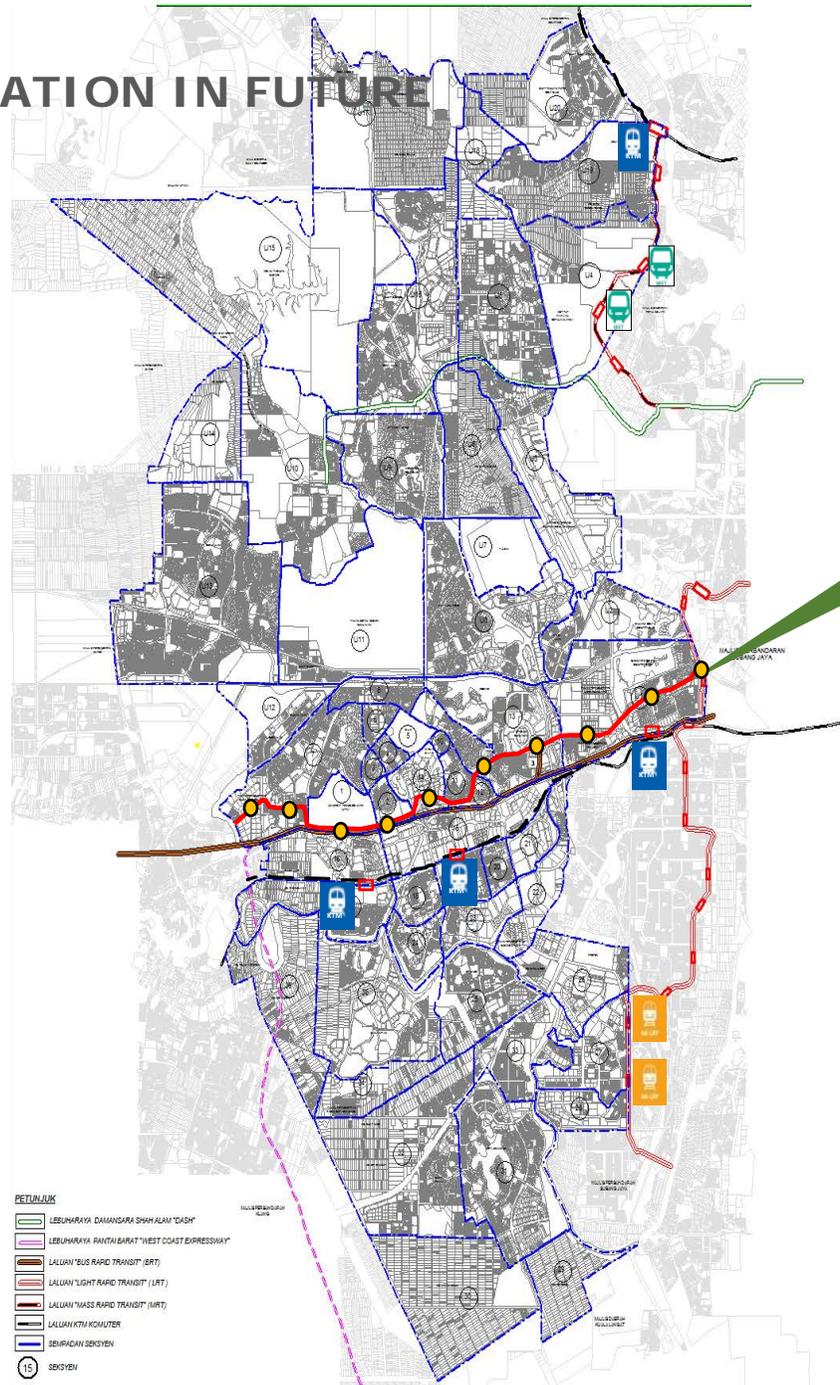
LRT 3

TOTAL STATION 10

TOTAL NETWORK TRANSPORTATION 15.15 KM

PARK AND RIDE 3

INTEGRASION NETWORK TRANSPORTATION LRT2
KELANA
LINE



LRT 3

WAY FORWARD

SHAH ALAM TRANSPORTATION IN FUTURE

KL-KLANG BRT CORRIDOR

BUS

BRT (BUS RAPID TRANSIT)

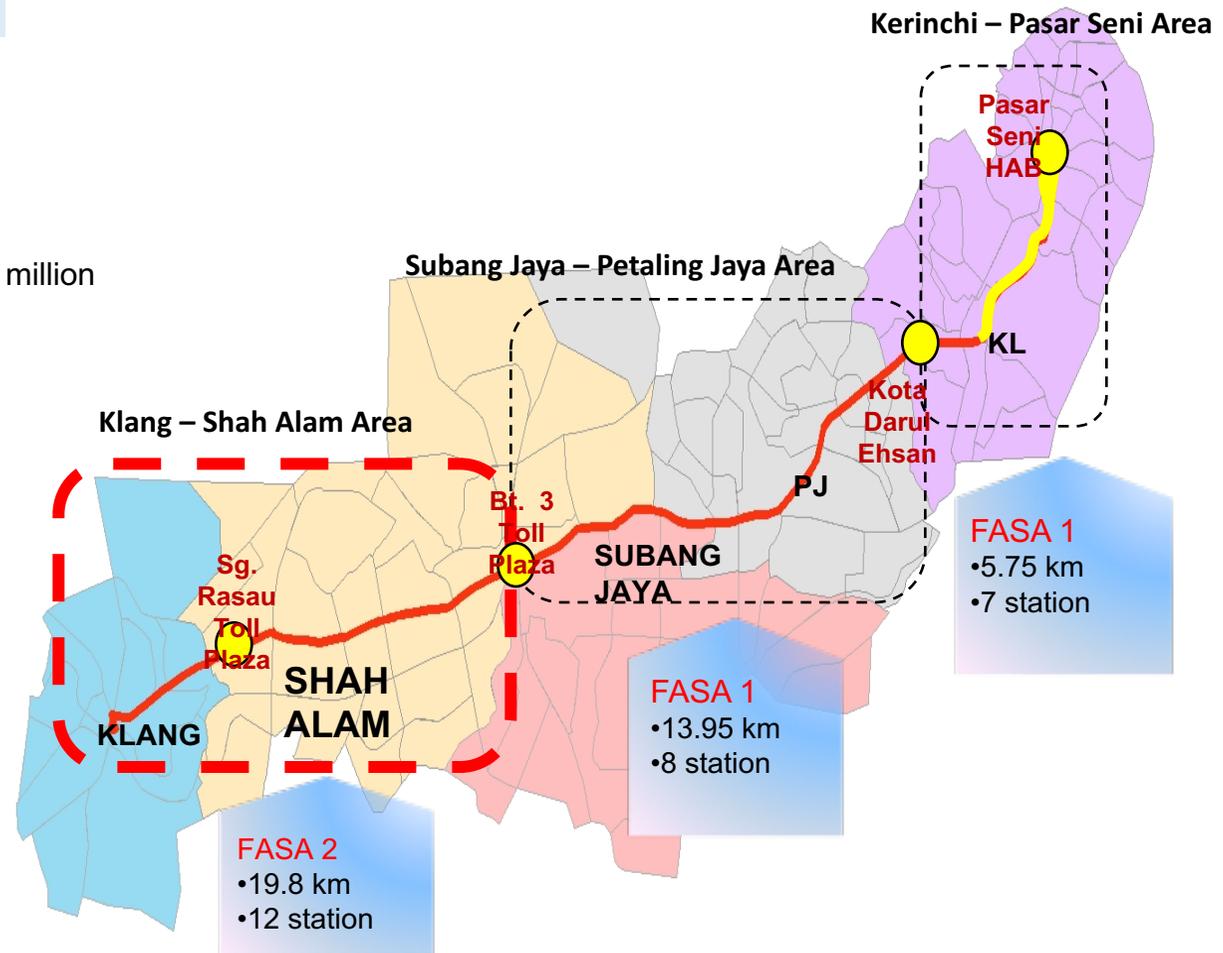
Construction Period

Phase 1: Nov 2014- Apr 2016

Phase 2: July 2015 – Dec 2016

Distant : 33.5 km x 3km radius

Area Cover : 256 km2 Populasi : 1.58 million



WAY FORWARD SHAH ALAM TRANSPORTATION IN FUTURE

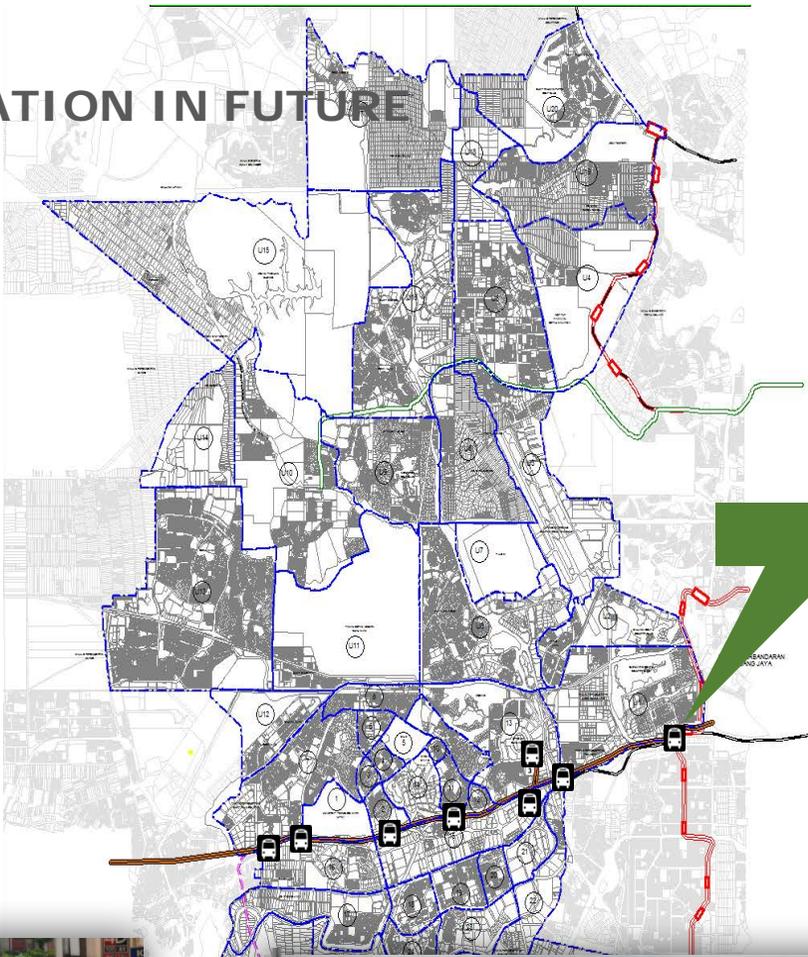
BUS

BRT (BUS RAPID TRANSIT)



Stesen BRT di Shah Alam:

- 1. Batu Tiga
- 2. Stadium Shah Alam
- 3. Kayangan
- 4. Shah Alam
- 5. UITM
- 6. Padang Jawa
- 7. i-City
- 8. Bukit Raja



PROVIDING EFFICIENT TRANSPORTATION AND MOBILITY SERVICES

To encourage city residents to use the eco-friendly public transport facilities - Selangor smart buses and electric buses.

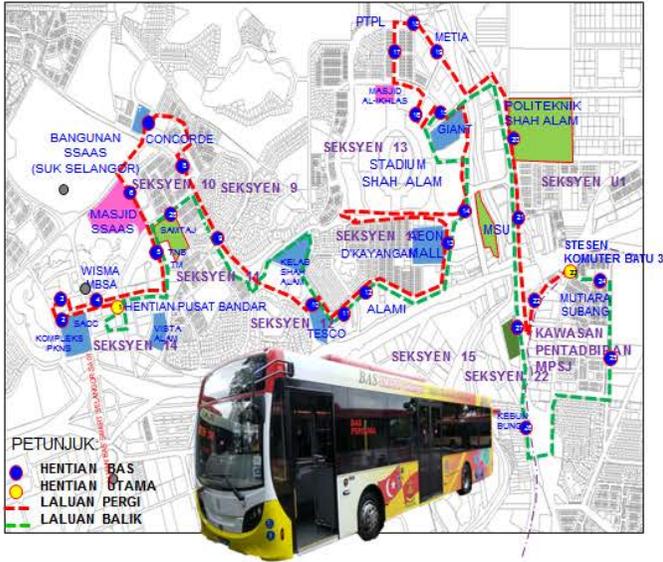
1. Provide free services
2. 2 electric buses units (reducing carbon dioxide emissions (CO₂)) by 0.822KG / KM
3. 1 bus can replace the minimum of 30 cars unit. Buses are green transport modes. Reduce of

CO₂ emissions - 7.8 kg / km.

- Park & ride provision
- Green vehicles



**GREEN INISITIVE
SMART
SELANGOR
BUS**



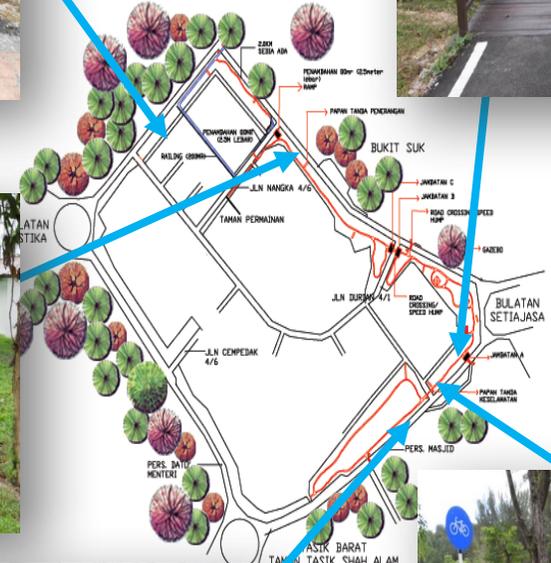
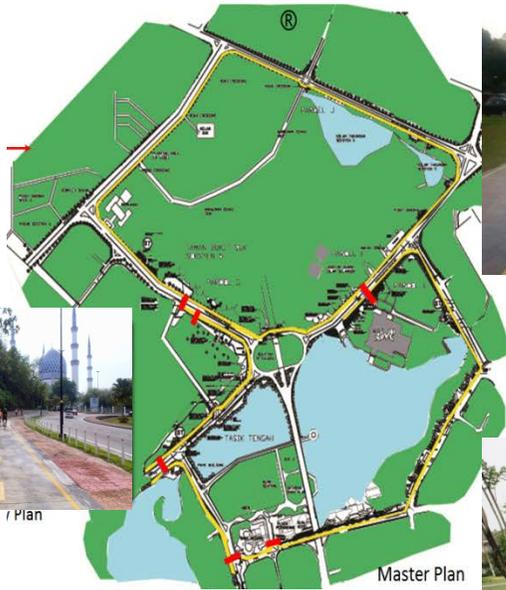
2. PROMOTE GREEN MOBILITY THROUGH PROVIDING BICYCLE TRACK

BICYCLE

BICYCLE TRACK

SHAH ALAM URBAN TRACK

SHAH ALAM CITY



WAY FORWARD

SHAH ALAM TRANSPORTATION IN FUTURE

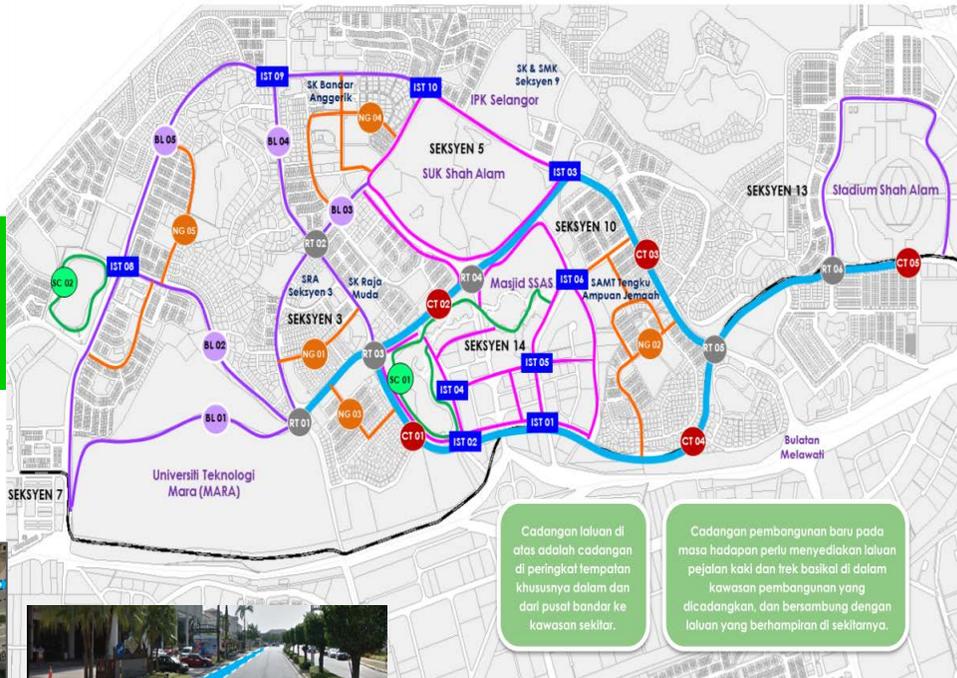
IMPROVEMENT ON TRAFFIC FLOW

Promote hybrid cars and bicycle use to offices.

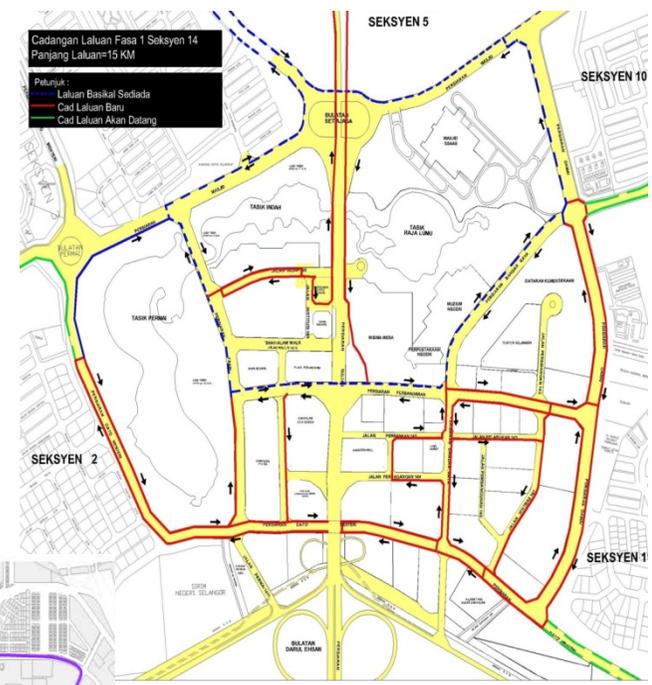
1. Installation of electric vehicles.
2. Bicycle path
3. 1 private vehicle unit releases 0.26kg / km carbon dioxide.



**GREEN INISIATIVE
BICYCLE
TRACK**



**TOTAL
75.55 KM**



- ADDITIONAL 15KM BALANCES
- CONNECTING THE MAIN AREA IN THE CITY
- AIMS TO ENCOURAGES USING BIKES AND REDUCING VEHICLE VEHICLES IN THE TOWN CENTER
- 1 PERSONALIZED VEHICLE UNDER CONSTRUCTION 0.26KG / KM CARBON DIOKSIDA CO2

PROVIDE EFFICIENT TRANSPORT AND CARE SERVICES

Effective and Systematic Traffic Management

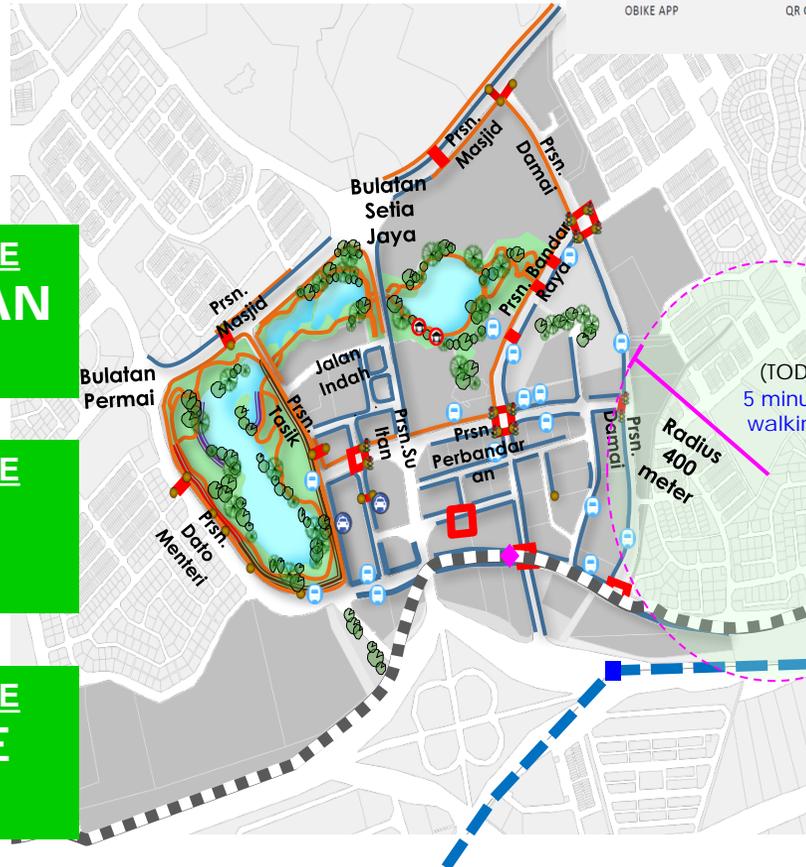
- Pedestrian Walk
- bicycle rental
- Car Free Day



**GREEN INITIATIVE
PEDESTRIAN
WALK**

**GREEN INITIATIVE
BICYCLE
RENTAL**

**GREEN INITIATIVE
CAR-FREE
DAY**



RENTAL

**RM1.00 /
15 MINUTE**



Persiaran yang terlibat:

- Persiaran Perbandaran
- Persiaran Dato Menteri
- Persiaran Tasik
- Persiaran Damai
- Persiaran Masjid

Jarak sepanjang 5km

Basikal santai
Rollerblade
Papan luncur
Hover board
Jalan kaki
Skutter blade

<https://facebook.com/Shah-Alam-Car-free-Day-55565019121026/>



3. PROMOTE GREEN MOBILITY THROUGH PROVIDING CHARGING STATION FOR ELECTRIC CAR

PROMOTING ELECTRIC VEHICLES



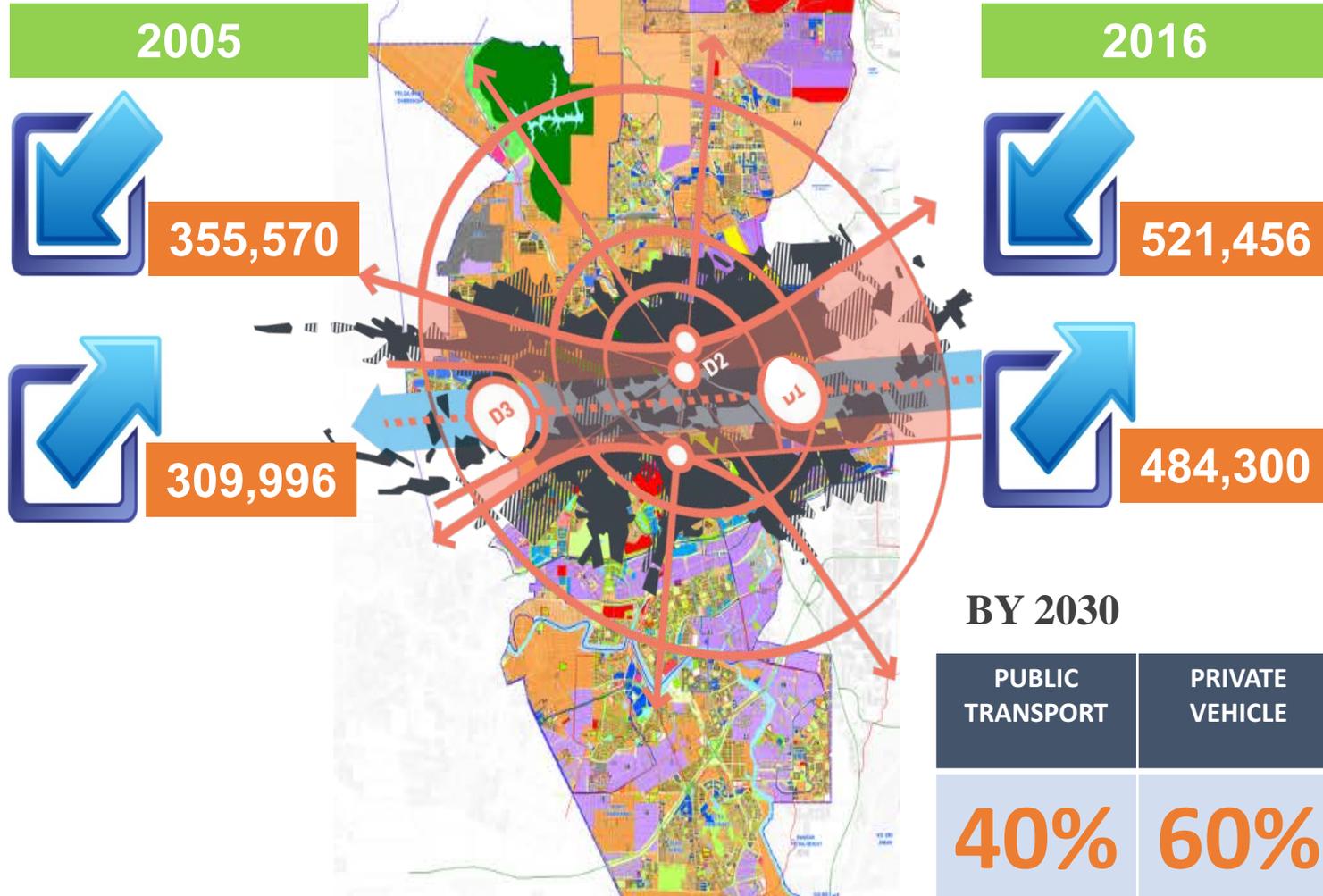
**GREEN INITIATIVE
ELECTRIC
VEHICLES**



WAY FORWARD

SHAH ALAM TRANSPORTATION IN FUTURE

VEHICLE IN / VEHICLE OUT



Low Carbon Pilot Project

Shah Alam city centre - (section 14)

6.0 ENERGY



5.0

OTHER LOW CARBON CITY PROJECTS GREEN TECHNOLOGY PARK



5.1 GREEN TECHNOLOGY PARK

- i. Grasscrete Car Park
- ii. Environmentally friendly Carbon Core Premix Pavement

Proposed upgrading work for Existing Car Park (Infront of Wet World) to Grasscrete Car Park and related work on Persiaran Dato' Menteri, Seksyen 2 Shah Alam.

SH359/2013
Nz Binar
Resources

Cost:
Rm179,900.00

Before



After



ROAD PAVING USING CARBON CORE (PREMIX SEJUK)

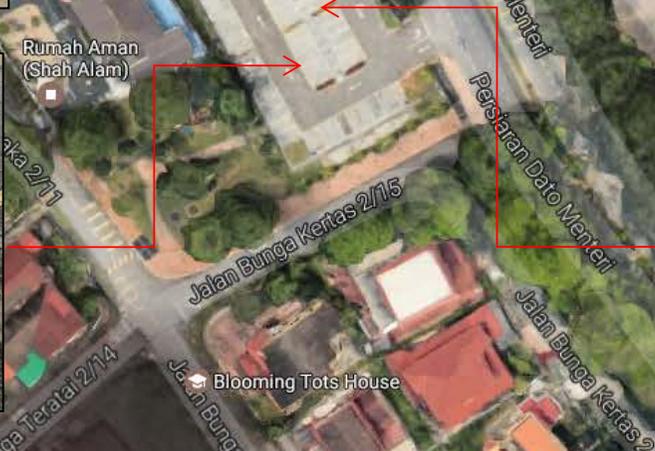


WAY FORWARD

OTHER LOW CARBON CITY PROJECTS

GREEN TECHNOLOGY PARK

- Repairing Rainfall System (SPAH)
- Disabled car park
- Installation of Sound Signal Sounds for disable people
- Installation of "Tactile" On Pedestrian Route
- Installation Reminder Signage "Turn Off Your Engine "



WAY FORWARD

OTHER LOW CARBON CITY PROJECTS

GREEN TECHNOLOGY PARK

- Planting Low Carbon Trees
- Landscape Maintenance Works



OTHER LOW CARBON CITY PROJECTS
LED STREET LIGHTING

5.2 LED STREET LIGHTING

- In a Proposal Process to change HPSV street light to LED street light through Privatization Project.
- Involving all street light under the jurisdiction of Majlis Bandaraya Shah Alam (MBSA)
 - Total Street Light Pole = 56,392 units
 - Total Light Bulb = 64,498 units
 - Conversion and Installation Cost to LED
RM 2,500 x 64,498 units = RM 161,245,000.00
- ***Estimated cost reduction from energy consumption is by 50%***
- ***Estimated carbon reduction of 244,612,700 Kg Carbon by 2030***

OTHER LOW CARBON CITY PROJECTS LED STREET LIGHTING

GREENHOUSE GAS (GHG)

Total Light Bulb (70W/150W/250W/400W) = 64,498 units

Anggaran purata untuk kiraan = 200Watt

•HPSV (SON)

Greenhouse Gas (GHG) = Energy Consumption (kWH) X
GHG Coefficient

$$= 668,715,264 \text{ X}$$

0.73159 (Malaysia)

$$= 489,225,400 \text{ kg}$$

Carbon

•LED (Save by 50%)

Greenhouse Gas (GHG) = Energy Consumption (kWH) X
GHG Coefficient

$$= 334,357,632 \text{ X}$$

0.73159 (Malaysia)

$$= 244,612,700 \text{ kg}$$

Carbon

HPSV (SON)	kWH	Bil TNB Kod G RM 0.123/kWH
1 Day (12 hours)	154,795	19,039.81
1 Month (x 30 days)	4,643,856	571,194.29
1 Year (x 12 month)	55,726,272	6,854,331.46
12 Year (2030)	668,715,264	82,251,977.47

OTHER LOW CARBON CITY PROJECTS LED STREET LIGHTING



- Installation of LED Street Light (implemented)
- Location: Main thoroughfare at city centre
- Contract Price: RM 975,000 (390 Units)

OTHER LOW CARBON CITY PROJECTS SOLAR LIGHT

5.3 SOLAR LIGHT



- Installation of solar light with motion sensor
- Location: Seksyen 4 Park

OTHER LOW CARBON CITY PROJECTS LED TRAFFIC LIGHT

5.4 LED TRAFFIC LIGHT



- LED Traffic Light Installation
- Location: Persiaran Kayangan (Hotel Concorde intersection)
- Contract Price: RM 286,440.00

OTHER LOW CARBON CITY PROJECTS HIGHMAST LED

5.5 HIGHMAST LED



- Highmast LED Light Installation
- Contract Price:
RM 372,886.00

Low Carbon Pilot Project

Shah Alam city centre - (section 14)

7.0 GREENERY



6.0 LOW CARBON PILOT PROJECT, SECTION 14, SHAH ALAM

GREENERY



Tree Planting Programme Collaboration With Other Stakeholders, I.e Developers, Ngo, Community Partners



Shah alam orchid show – Awareness Program to get communities exposed of other species of trees.



BACK LANE GREENING INITIATIVE

Collaboration with Residents. Introduce Green lane + urban Farming.



GREENING THE CITIES.

-Along the road sides.

-Monitor data

BULAN	PENANAMAN								JUMLAH BESAR
	POKOK		PALMA		RENEK		JUMLAH		
	PEMAJU	MAJLIS	PEMAJU	MAJLIS	PEMAJU	MAJLIS	PEMAJU	MAJLIS	
JAN	340	154	14	30	9,210	10,159	9,564	10,343	19,907
FEB	1,368	-	24	24	925	7,932	2,317	7,956	10,273
MAC	2,188	127	9	0	875	20,504	3,072	20,631	23,703
APRIL	946	916	62	40	1,600	14,692	2,608	15,648	18,256
MEI	1,072	239	6	305	5,727	5,483	6,805	6,027	12,832
JUN	358	209	49	55	2,578	1,420	2,985	1,684	4,669
JUMLAH	6,272	1,645	164	454	20,915	60,190	27,351	62,289	89,640
JUMLAH JAN-JUN	7,917		618		81,105		89,640		
JUMLAH JUN	567		104		3,998		4,669		



GREENING THE CITIES



Low Carbon Pilot Project

Shah Alam city centre - (section 14)

8.0 WASTE & WATER MANAGEMENT



6.0 LOW CARBON PILOT PROJECT, SECTION 14, SHAH ALAM

WATER RESOURCES



IBU PEJABAT LAMAN PKNS



POINTS	GBI RATING	INFERENCE
50 to 65	GBI CERTIFIED	Good Practice
66 to 75	GBI SILVER	Excellent Practice
76 to 85	GBI GOLD	National Excellence
86 +	GBI PLATINUM	Global Excellence

95/100

GREEN BUILDING INDEX CERTIFICATE NO.
GBI-NRNC-0162(P)

DATE OF ISSUANCE
10 SEPTEMBER 2015

LAMAN PKNS RETAIL

PT 43, PRECINT 8.8, JALAN INDAH, SEKSYEN 14, 40000 SHAH ALAM, SELANGOR

HAS BEEN AWARDED



PLATINUM

DA
DESIGN ASSESSMENT

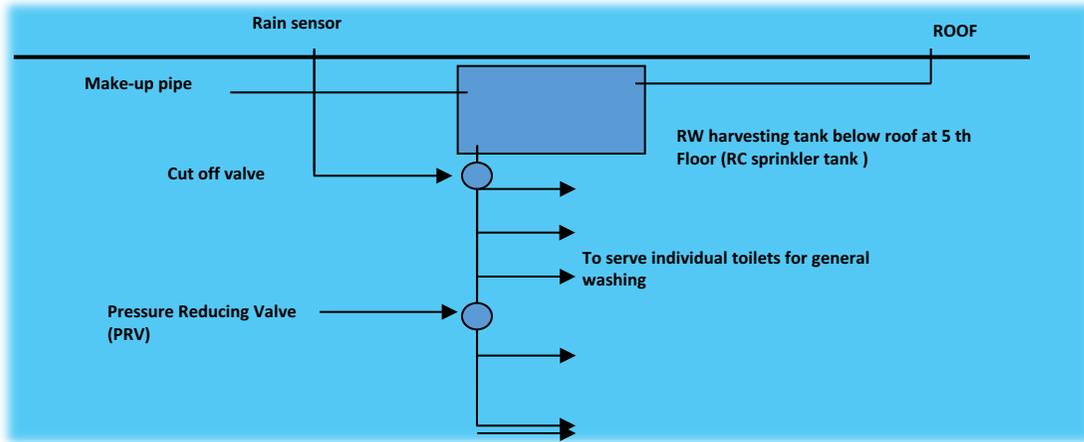
PROVISIONAL GBI CERTIFICATION

OWNER/APPLICANT
PERBADANAN KEMAJUAN NEGERI SELANGOR

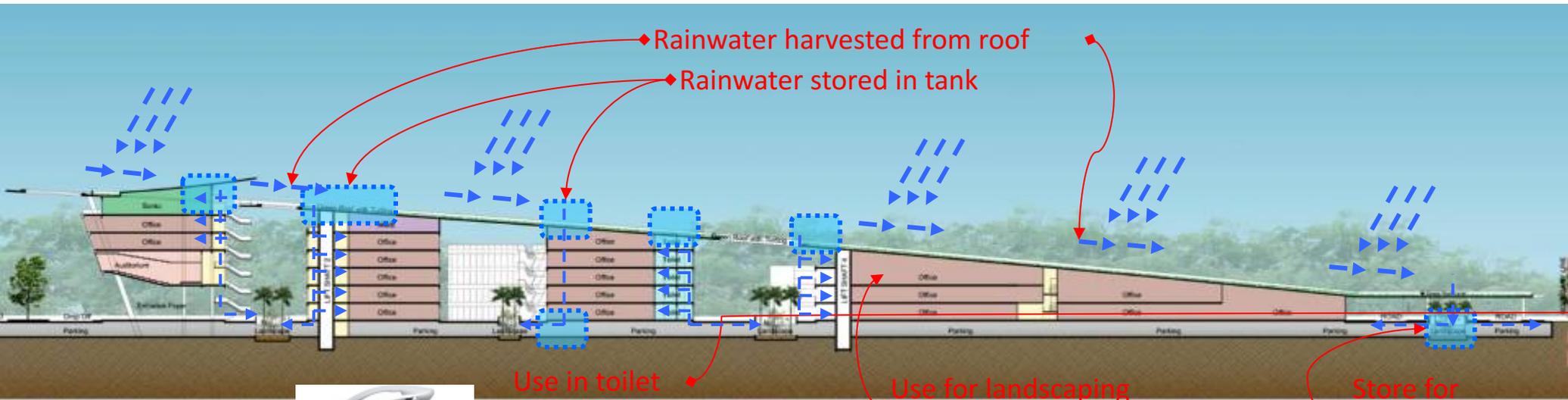
AR. CHAN SEONG AUN
CHAIRMAN
GREEN BUILDING INDEX (GBI) ACCREDITATION PANEL

GREENBUILDINGINDEX SDN BHD (845666-V)
A-12-13A Menara UDA Bangsar, 5 Jalan Bangsar Utama 1, 59000 Kuala Lumpur, Malaysia
Tel 603 2283 2546 Fax 603 2284 2546
www.greenbuildingindex.org | info@greenbuildingindex.org

- Rainwater Harvesting initiatives



PKNS BUILDING - managing the Grey water



• Self closing tap
• Water efficiency fitting

**WASTE
MANAGEMENT
PROGRAMME BY
MBSA**

- **Use your own container campaign**
- **Reduce plastic use at all retails/shops**
- **7 days/week no plastic bags at all supermarkets**
- **Re-cycle waste programmes**
- **Separation at source programme involvindh 4,849 residents**
- **E- waste program**
- **Other promotion through pamphetes and electronic board**

**WASTE
MANAGEMENT
PROGRAMME BY
MBSA**

- **Yearly Recycling program with schools**
- Providing 6 Recycling Centres throughout the city to give facilities to communities
- Cooking oil recycle programme
- 7 composting machines located at City Centre and adjacent areas for the leftover food to recycle for fertilizers
- Composting Centres for dried leaves and other related garden leftovers

NO POLISTERENE CAMPAIGN



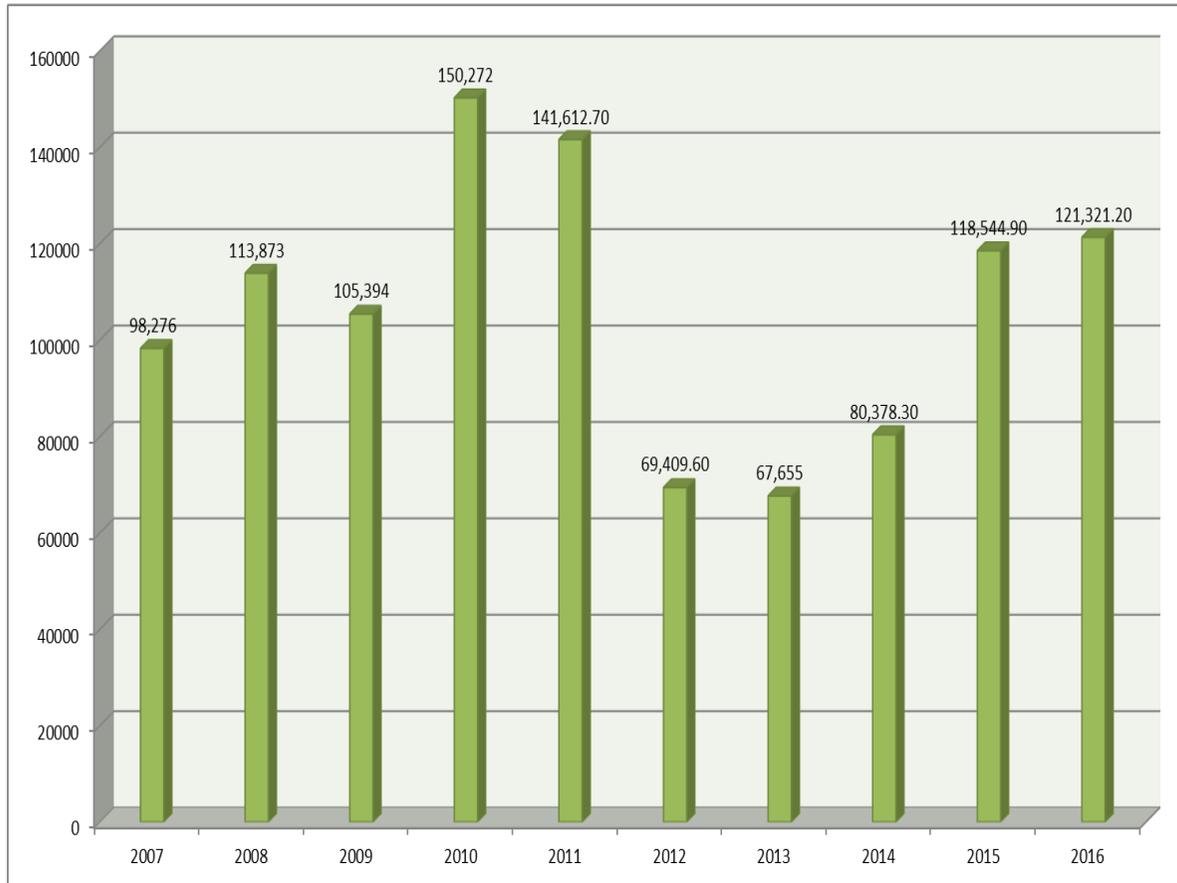


**CONTINUOUS AWARENESS PROGRAMME
ADVERTISED THROUGH OUT FOR
INFORMATION**

**RECYCLING PROGRAM AT SCHOOL
LEVEL SINCE 2007 WITH PRIVATE
ORGANISATION**



RECYCLING RATE IN SCHOOLS 2007 - 2017



MORE SCHOOLS AND MORE STUDENTS RECYCLE ITEMS FROM HOME AND SCHOOL



RECYCLE OF USED COOKING OIL



TAHUN	JUMLAH (kg)
2009	720
2010	900
2011	1,000
2012	1,200
2013	5,648
2014	7,878
2015	74,276
2016	88,342
TOTAL OVERALL	179,964

DATA FOR RECYCLED OF
COOKING OIL FOR 2009 - 2016

**INCREASING QUANTITY OF
RECYCLED USED COOKING
OIL**

RECYCLE PROGRAMME

Started since 2010

Prizes include cash and certificate

KEDUDUKAN	KATEGORI MPP (RM)
Pertama	1,000.00
Ke-dua	800.00
Ke-tiga	600.00
Ke-empat	400.00
Ke-lima	300.00
Ke-enam	200.00
Ke-tujuh	200.00
JUMLAH	RM 3,500.00



Overall Total Recycle for 2016 : 13,213.90 kg

Composting centre AT WET MARKET



COLLECTION OF WASTE FROM WET MARKET FOR COMPOSTING 2016

MONTH	WASTE FROM MARKET	FERTILIZER COMPOST
Jan	6,063.00	1,897.50
Feb	3,790.00	1,265.20
Mar	5,020.50	1,389.00
Apr	3,724.00	1,159.50
Mei	3,947.00	1,202.00
Jun	4,634.00	1,607.00
Julai	768.00	196.00
Ogos	954.00	423.00
Sept	3,077.00	1,405.00
Okt	1,891.00	895.00
Nov	1370.00	569.00
Dis	1,120.00	553.00
TOTAL	36,358.50	12,561.20



Composting Centre For garden waste



WAY FORWARD

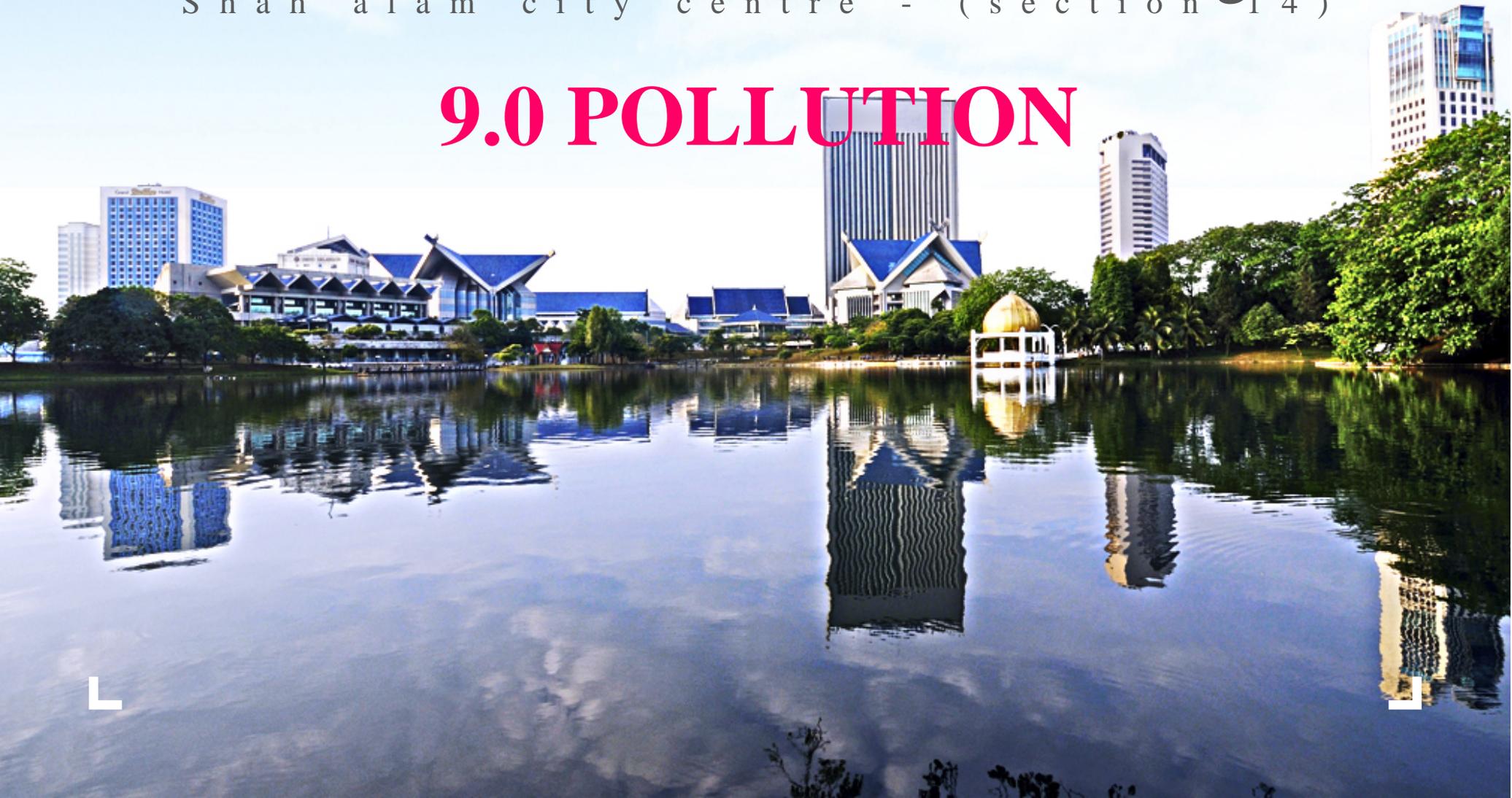
WASTE MANAGEMENT

- To provide Recycle centres at all neighbourhood areas
- Increase more recycling centres throughout the Municipality
- To Provide compost centre for waste cleaning
- Develop Collection and Processing E-waste through collaboration with private company Syarikat Jaring Metal Sdn Bhd
- To use the biodegradable garbage bag for the residents and garbage contractor
- To develop recycling policy for Shah Alam
- To improve recycling procedures and standards for industry and manufacturing.
- To develop recycling and processing services for construction material
- To reduce and ultimately eliminate the illegal waste dump area.
- Increase percentage of recycling to 20% by 2020
- To achieve 100% separation at source by 2018
- Target to reduce waste by 40% by 2020

Low Carbon Pilot Project

Shah Alam city centre - (section 14)

9.0 POLLUTION



Rehabilitation of Shah Alam Lake Water Quality



07.10.2016



07.09.2016

Penaburan "Functional Microbe" dan "Eko-Klean Flocculant"



26.0



Warna air yang kekuningan dan hijau disebabkan oleh wujudnya planktonic algae



PURIFICATION SYSTEM



AERATORS



TURBIDITY CURTAIN

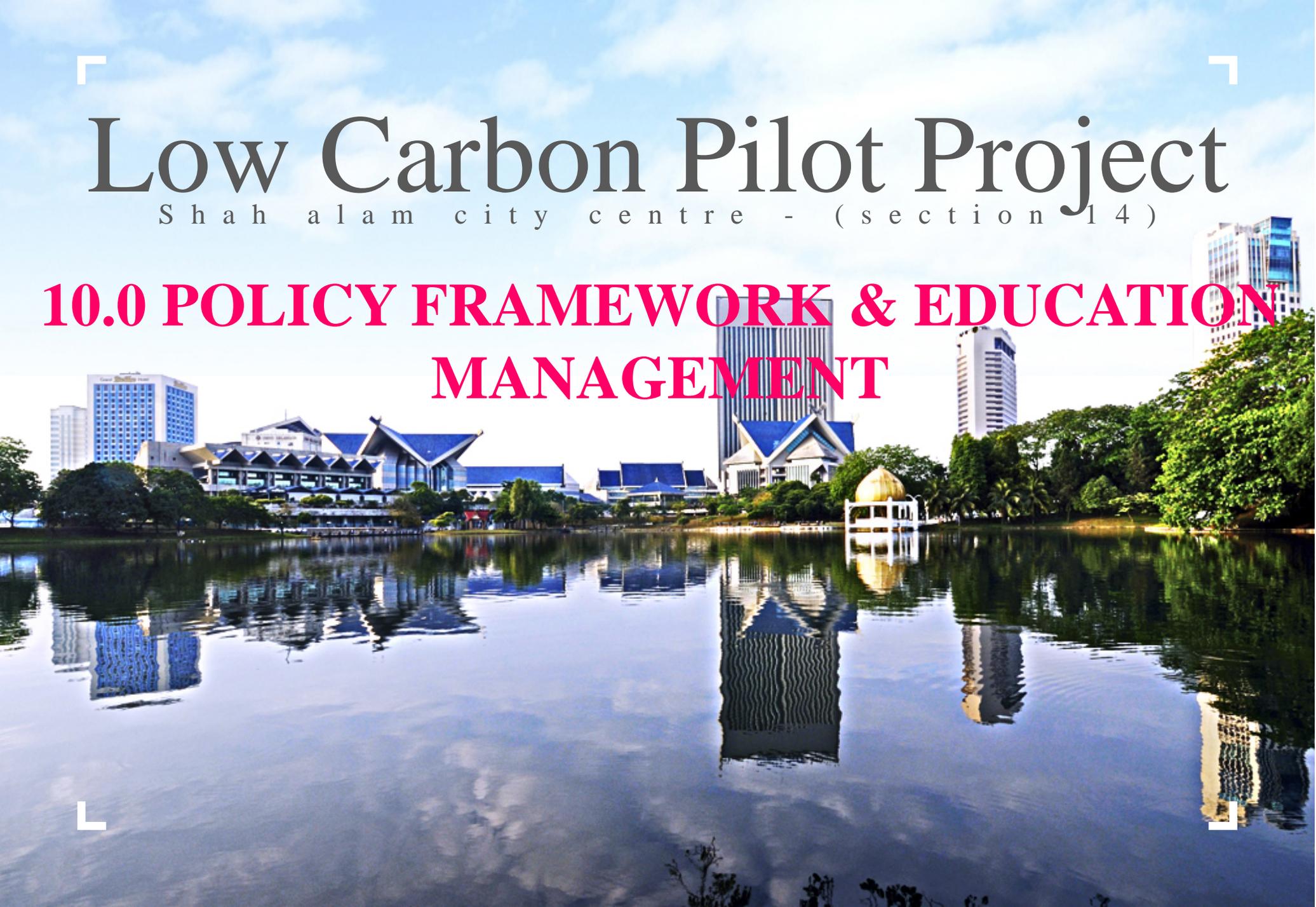
23

05.10.2016

Low Carbon Pilot Project

Shah Alam city centre - (section 14)

10.0 POLICY FRAMEWORK & EDUCATION MANAGEMENT

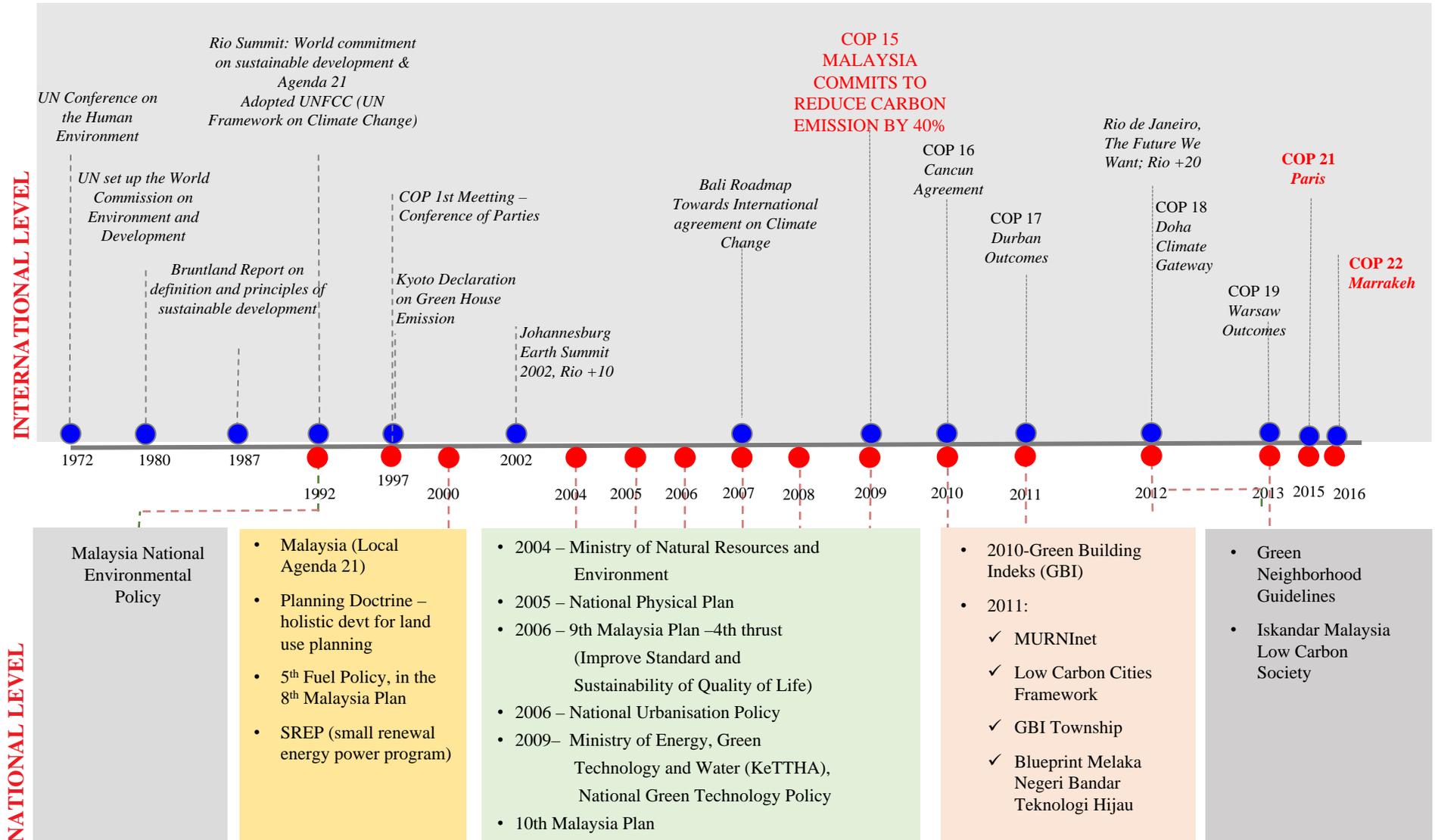


8.0 LOW CARBON PILOT PROJECT, SECTION 14, SHAH ALAM

GOVERNANCE

REGIONAL CONTEXT- MALAYSIA SUSTAINABLE AGENDA

“Malaysia started to address environmental issues and achieving the sustainable development since 1972 after joining The United Nations Conference on the Human Environment”



UNITED NATIONS CLIMATE SUMMIT 2014

23 September 2014, New York, USA

// **Malaysia will continue to act on climate change. We have new policies to promote energy efficient vehicles, a new corporate greenhouse gas reporting programme, a building sector energy efficiency project and a **LOW CARBON CITY FRAMEWORK**.**

//

*YAB Dato' Sri Mohd Najib Tun Abdul Razak
Prime Minister of Malaysia*

33% ↓

Malaysia had already reduced the emissions intensity of its GDP by more than 33% despite facing difficulties in fulfilling the pledge made in Copenhagen 6 years ago



Datuk Seri Dr Wan Junaidi Tuanku Jaafar - The Natural Resources and Environment Minister

“Malaysia is the fourth largest emitter of greenhouse gases in ASEAN, behind Indonesia, Vietnam and Thailand, contributing to 0.52% of the world’s carbon emissions”

“Malaysia is saying that when we ratify, we are going to give some kind of assurance to the UN that we can perform it. “But we are now in position to ratify the Paris agreement. I believe we will be one of the 55 countries. Not this trip, but the Prime Minister has already agreed and we can commit before December 2016,” Wan Junaidi said.

(Source: <http://www.thestar.com.my>)



26TH ASEAN SUMMIT, APRIL 2015

Pushing Ahead the Green Agenda

As next year’s ASEAN chair, Malaysia will be the advocate for sustainable growth and climate action.

*YAB Dato' Sri Mohd Najib Tun Abdul Razak
Prime Minister of Malaysia*

UNITED NATIONS CONFERENCE ON CLIMATE CHANGE 2015 (COP21/CMP11)

2nd DECEMBER 2015 , PRIME MINISTER OFFICE

//

Malaysia intends to reduce reduce its greenhouse gas (GHG) emissions intensity of Gross Domestic Product (GDP) by **45 percent** by **2030** relative to the emissions intensity of GDP in 2005.

This consists of

- i.35 percent on an unconditional basis and
- ii.10 percent is condition upon receipt of climate finance, technology transfer and capacity building from developed countries.

//

*YAB Dato' Sri Mohd Najib Tun Abdul Razak
Prime Minister of Malaysia*

Malaysia ranked **26th** worldwide in **2012** carbon dioxide (CO₂) emissions from fuel combustion.
(United Nation)

Malaysia remained steadfast and committed in its mission to reduce Malaysia's carbon footprint and under the 11th Malaysia Plan (2016-2020), policies that will further focus on pursuing green growth for sustainability and resilience will be carried out.”

Malaysia's total GHG emissions represent about 0.6% of global emissions in 2011. The emission intensity per GDP was 0.41 tCO₂eq/RM1000 for that year.

Malaysia's Key Significant Commitment to Carbon Reduction

The 11th Malaysia Plan marks another new milestone for efforts towards carbon reduction



Green Governance

Government Green Procurement (GGP)

MALAYSIA TARGETS 20% OF GOVERNMENT PROCUREMENT TO BE FOR GREEN PRODUCTS AND GREEN SERVICES BY 2020.

- Government as catalyst to create green markets in products and services as well as buildings.
- Encourage industries to raise the standard and quality of their products to meet green requirements.
- Encourage SME to develop green products and services, eventually leading to further greening the supply chain.

Green Environment

Low Carbon

MALAYSIA TARGETS 45% GHG REDUCTION BASE ON 2005 LEVELS BY 2030.

- Conserve 17% terrestrial and inland water areas.
- Conserve 10% of coastal and marine areas as protected areas.
- Formulate a comprehensive national disaster risk management policy and related legislation as well as relevant standard operating procedures.
- Set up a National Crisis and Management Centre – as a training centre as well as a platform for engagement with stakeholders.
- Upgrade flood forecasting and warning system to allow longer lead time to reduce damage during floods.

LOCAL CONTEXT- SHAH ALAM SUSTAINABLE AGENDA

MBSA STRATEGIC PLAN 2016-2020

STRATEGIC-1

STRATEGIC-2

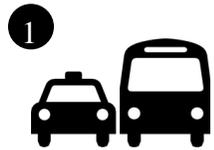
STRATEGIC-3

STRATEGIC-4

STRATEGIC-5

STRATEGIC-6

SHAH ALAM LOW CARBON ACTION PLAN 2030



Efficient & Effective Mass
Public Transport



Energy Efficient / Low
Carbon Buildings



Eco-friendly Solid
Waste Management



Electric / Energy Efficient
Management



City Management with
Green Technology

SHAH ALAM GREEN INITIATIVE 2017



MBSA



DEVELOPER



PEOPLE

LOCAL CONTEXT- SELANGOR STATE SUSTAINABLE AGENDA

LEVEL

DOCUMENT/POLICY IMPLEMENTATION

INTERNATIONAL



=

- ✓ New Agenda is an agenda of political statement not legally binding for United Nations member countries to achieve the human capital development and human development goals by 2036
- ✓ In New Agenda 17 sustainable development goals are formed by Sustainable Development Goals (SDG). This declaration is a commitment and action to be taken by Malaysia to ensure sustainable development can be achieved by 2036.
- ✓ It encompasses some elements of sustainability such as poverty, lack of hunger, health and well-being of the city, quality education, gender equality, clean water systems and clean water, Clean energy sources and other sustainability issues

NATIONAL



=

- ✓ National Physical Plan
- ✓ Green Technology Policy
- ✓ Low Carbon Cities Framework (LCCF)
- ✓ MURNInets
- ✓ Green Neighborhood Guidelines

STATE



=

- ✓ State Structure Plan
- ✓ Smart Selangor
- ✓ State Green Technology Action Plan

NEWS PAPER ARTICLES RELATED TO LOW CARBON INITIATIVES



MOU signing between, MBSA, Malaysia Greentech Corporation (MGTC) and Malaysian Institute Planners (MIP) - 8hb Jun 2016

Shah Alam

glohu
hm

Bandar raya rendah karbon 2030

Shah Alam bakal menjadi sebuah bandar raya rendah karbon menjelang 2030 apabila Majlis Bandaraya Shah Alam (MBSA) dengan kerjasama Kementerian Tenaga, Teknologi Hijau dan Air (KeTTHA) dan GreenTech Malaysia (MGTC) membangunkan Rangka Kerja Perbandaran Rendah Karbon (LCCF).

Datuk Bandar Shah Alam Datuk Ahmad Zaharin Mohd Saad berkata, rangka kerja berkenaan adalah panduan dalam menyediakan perancangan dan pembangunan mampan yang dapat menyumbang kepada pengurangan pembebasan gas rumah kaca.

Bandar konsep bandar raya rendah karbon

SH
28/6/16



Ahmad Zaharin sedang melakukan plumb mengcas kenderaan elektrik semasa Majlis Pelancaran EV Charger (pengecas elektrik) kenderaan.

SHAHALAM - Secuali 150 peserta meriah Taklimat Kempen Bangunan Rendah Karbon Shah Alam 2016 dianjurkan Majlis Bandaraya Shah Alam (MBSA) di Wisma MBSA, Khamis lalu.

Kempen melibatkan peserta dalam kalangan wakil pemilik bangunan di sekitar Shah Alam dan pegawai pengurusan MBSA itu bertujuan memberikan pendedahan menyeluruh mengenai konsep Shah Alam Bandaraya Rendah Karbon Menjelang 2030.

MBSA berkata, peserta diberi peluang untuk berkhidmat tindakan analitis terbaik dalam

bangunan lain.

Peserta diberikan taksirul gran audit tenaga beryarat untuk bangunan komersial di bawah Rancangan Malaysia Ke-11 (RMK-11) selain sesi perkongsian pengalaman pelaksanaan dan penantaraan audit tenaga beryarat daripada Ketua Unit Pengurusan Permintaan Tenaga (Celop Tenaga), Sustainable Energy and Authority Malaysia (Seda) Steve Anthony Lajotis," katanya.

Pada majlis sama, MBSA turut melancarkan perancangan elektrik kenderaan (EV Charger)

'Shah Alam rendah karbon menjelang 2030'

28/6/16



Sebahagian peserta yang menyertai program Shah Alam Hari Tanpa Kenderaan 2017 di Dataran Kemerdekaan, Ahad lalu.

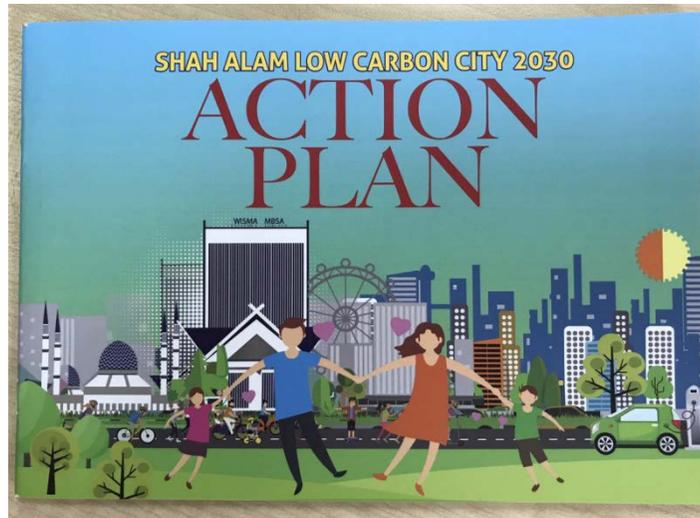
SHAHALAM - Majlis Bandaraya Shah Alam (MBSA) buat julung kalinya menganjurkan Program Shah Alam Hari Tanpa Kenderaan 2017 di Dataran Kemerdekaan, Seksyen 14, di sini, Ahad lalu.

Program Shah Alam Hari Tanpa Kenderaan 2017 ini diadakan bertujuan untuk melahirkan warga Shah Alam yang mengamalkan gaya hidup sihat, di samping mengurangkan penggunaan kenderaan di atas jalan raya yang menyebabkan pelepasan gas karbon monoksida

pelepasan peserta untuk aktiviti riadah seperti berbasikal, acara berjalan kaki dan persembahan pentas oleh korbo MBSA.

"Selain itu, terdapat juga gerai pameran seperti pameran kesihatan, pameran oleh penaja dan pameran dari agensi-agensi luar," katanya menerusi kenyataan.

Stahrin berkata, warga Shah Alam juga berpeluang untuk membeli makanan di food truck, jualan barang-barang/pakaian sukan, bazar seni dan pameran seni, produk hijau (Green Products) dan lain-lain.



LAUNCHING OF SHAH ALAM LOW CARBON ACTION PLAN 2030

LOW CARBON CITY INCENTIVES

PROJECT STATUS REPORT FOR 'LOW CARBON CITY FRAMEWORK' SHAH ALAM 2017

NO	PROJECT	STATUS
1.	<p>Shah Alam's Sustainable Development Proposal through the Carbon Low Carbon Action Plan By 2030.</p> <p>The Shah Alam Carbon Low Carbon Action Plan 2030 is agreed to be adopted in MBSA's Strategic Development Plans and subsequently a Blueprint to the development of Shah Alam.</p>	<p>a. "Blueprint" Shah Alam Carbon Low Carbon Action Plan 2030 Will Be Launched In A Townhall Session to be held on the 11th. July 2017</p>
2.	<p>Proposed Shah Alam Carbon Low City Award 2017.</p> <p>The proposed awards are: -</p> <p>a.Low Carbon Building Competition (By category Government/ Commercial / Industry)</p> <p>b.Low Carbon Scenario Competition (By category of IPTA / IPTS / Primary School / Secondary School)</p> <p>c.Low Carbon Innovation Competitio (By category Government / Commercial / Industry / IPTA / IPTS / School / Population / MPP)</p> <p>d.Low Carbon Icon Award (Adolescent / Youth / Population / Trade / Industry)</p> <p>The Shah Alam Low Carbon City Award presented at this Meeting has been approved for its relevance.</p>	<p>a. Low Carbon Award Briefing Session to Primary Schools, Secondary Schools, Factories In Shah Alam Was Held On 18th. May 2017.</p> <p>b. Poster competition will be distributed to every Primary School, Secondary School, Public Higher Learning Institute (IPTA), Private Higher Learning Institute (IPTS), Factory and Commercial In Shah Alam.</p> <p>c. Competition will be advertised on the Billboard to inform local residents.</p> <p>d. Closing date is on 15th. September 2017.</p>

NO	PROJECT	STATUS
3.	<p>PROJECT OF LOW CARBON DEVELOPMENT AND GREEN TECHNOLOGY SHAH ALAM CITY COUNCIL</p> <p>Volleyball Hall Section 4</p>	<p>a. The proposed energy audit was approved by the management of the council management meeting. No.5 year 2017 which has been convened on the 5th. April 2017.</p> <p>b. Memo Appointment Instructions Issued by Planning Department On 27th. April 2017.</p> <p>c. These works will use budget from engineering department VOT PROTECTED: Hall (Hall Section 4 - Towards Green Building).</p>
4.	<p>Laman Teknologi Hijau Phase 1, Section 2</p>	<p>a. Proposed installation for LED Solar Lights was presented at the stage of Infra Committee Meeting and approved at the Council Meeting on 29th. March 2017.</p> <p>b. Job offer will be advertised in early June 2017. Proposal this project will use allowance Code 56105 (Lamp).</p>
5	<p>Presentation of the preliminary report on the achievement of energy audits for buildings Wisma MBSA for energy audit program conditional by using existing grant allocation for commercial building sector under the 11th Malaysia Plan</p> <p>Preliminary report energy audit achievement at Wisam MBSA as follows :</p>	<p>22nd. May 2017</p> <p>a.Meeting regarding “<i>Kick-Off</i>” to discuss Energy Audit at MBSA</p> <p>b.Meeting with MBSA, TNec Dan Locarbon Solutions</p> <p>c.Installation 3 Units <i>Power Logger</i> in 2weeks (14 hours, 24 hours data collection)</p> <p>28nd. May 2017</p> <p>a.Consultant installed 1 Unit “<i>Flow Meter</i>” in one week to collect <i>Chilled Water</i></p> <p>5th. – 12th. Jun 2017 (Except holiday)</p> <p>a.Record the data on each floor of Wisma MBSA</p>

WAY FORWARD

LCCF SITE COVERAGE –

1. EXPANSION OF LOW CARBON BOUNDARY

In 2017, seven more city centre projects will implement the LCCF as outlined in the MBSA Strategic Plan 2015-2020 under Core 2. 7

The City Centre listed below are as follows: -

Town Centre
Section 14

323.26 ac

Setia Eco Park
Section U13

612.01 ac

Alam Impian
Section U35

1,235 ac

Sime Darby
Elmina Section
U16

1,041 ac

Kwasa Land
Section U4

632.32 ac

Eco Ardence
U12 & u13

533.91 ac

DEMC
Building
Section 14

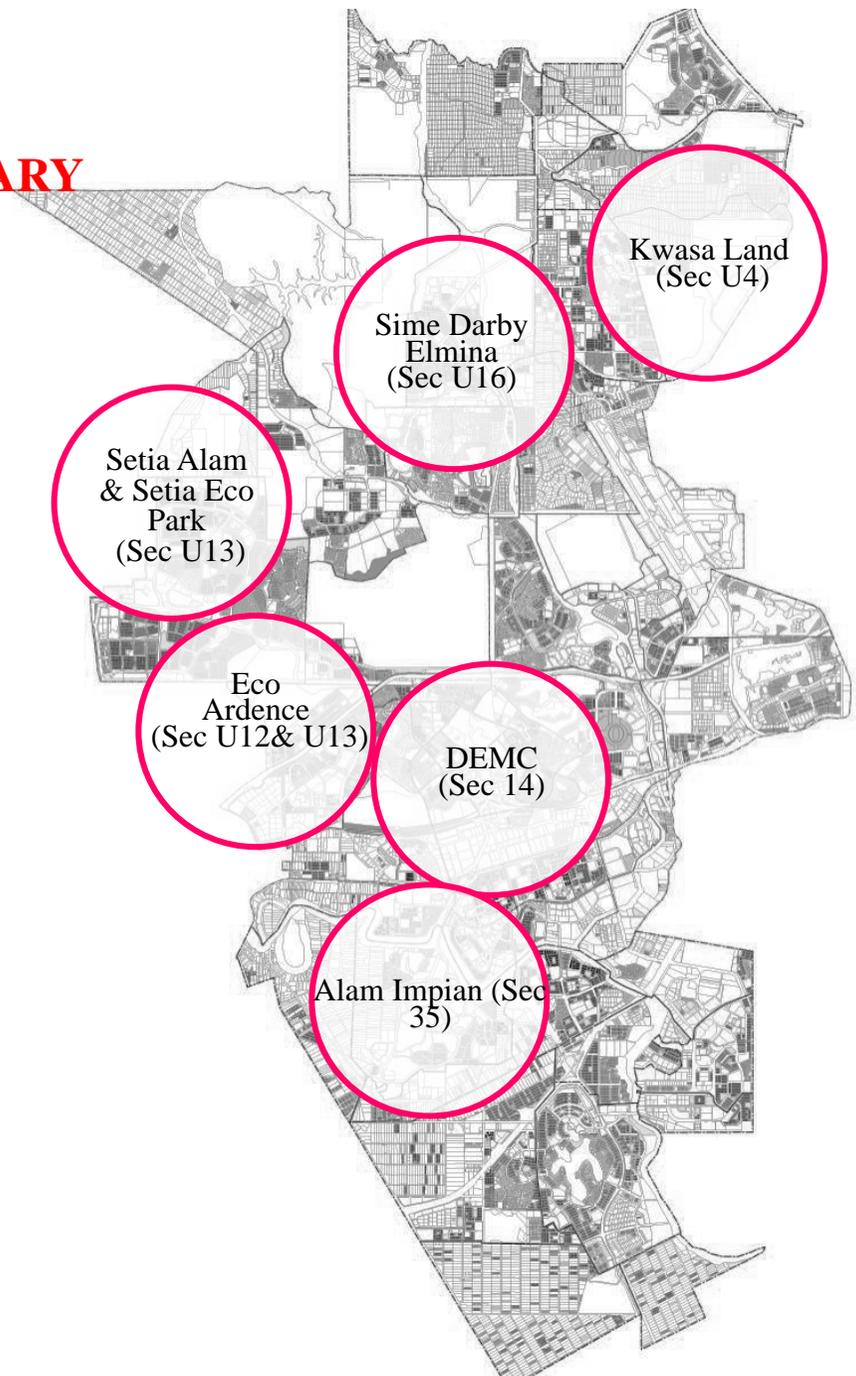
1.78 ac

Area expansion to

4,379.28 acre

LCCF Area Ratio by 2018

6%



WAY FORWARD

LCCF SITE COVERAGE – OTHER LOW CARBON CITY PROJECTS



1
GREEN
TECHNOLOGY
PARK

2
MBSA
BUILDING
AUDIT

3
LED STREET
LIGHTING

4
SOLAR
LIGHTING

5
LED
TRAFFIC
LIGHT

6
HIGHMAST
LED

8
MULTIPURPOSE
HALL AUDIT

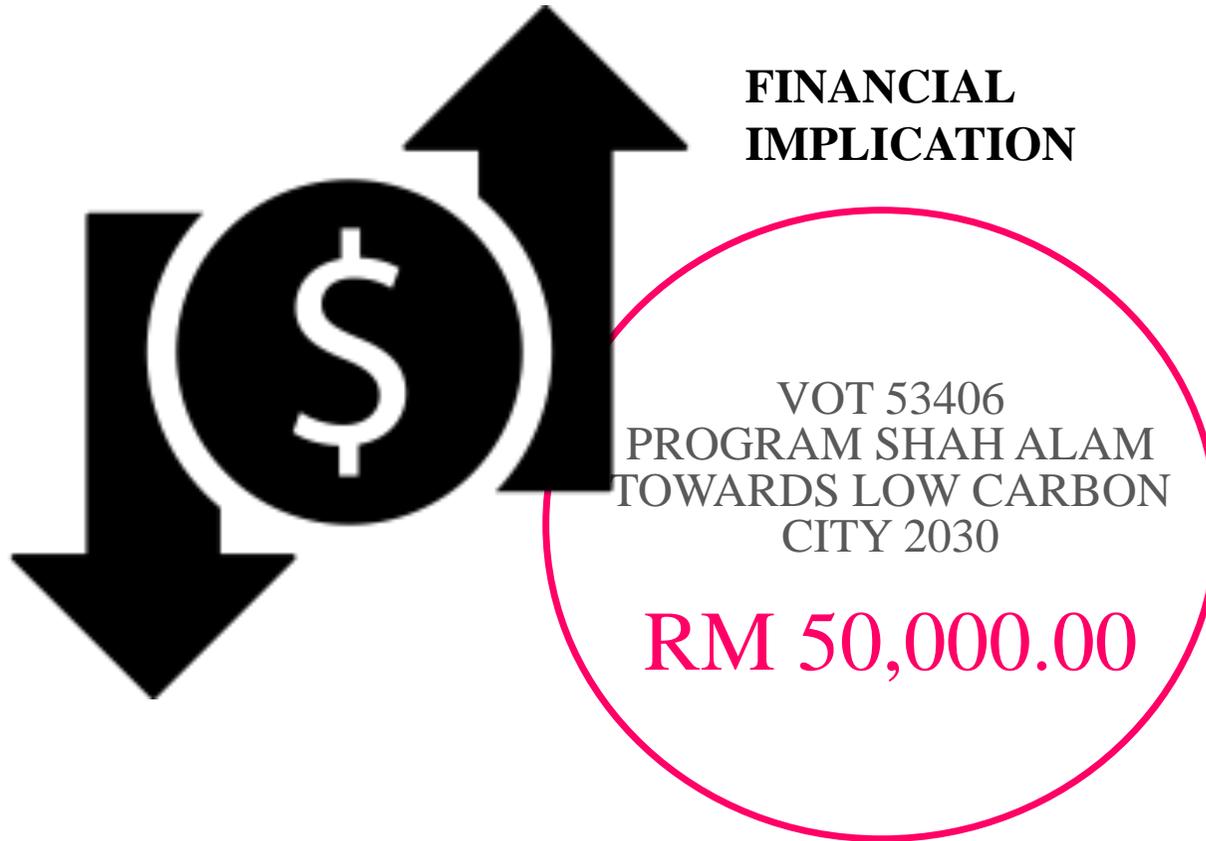
7
ROAD
MAINTENANC
E

LOW CARBON CITY INCENTIVES

2. PROPOSED SCHEME ASESMENT TAX REBATE



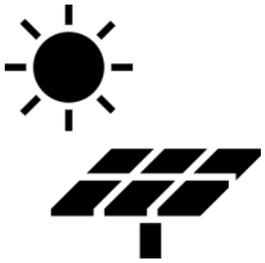
- ✔ MBSA data centre renovation costs are incurred by the Malaysian Green Technology Corporation (MGTC) and does not involve the council spending



LOW CARBON CITY INCENTIVES

INCENTIVE OF ASESSMENT TAX REBATE LOW CARBON SHAH ALAM

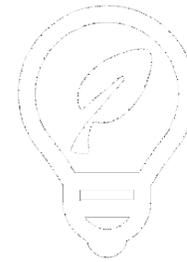
A. Energy



Installation of
Solar Heater
25%



Power Generation
with Solar Panel or
Other Renewable
Energy Resources
25%



The usage of
equipment/ 5 star
power-saving
equipment **20%**

B. Water



Installation of
Rainwater Harvesting
Systems to save at
least 30% of tap
water – **25%**



Waste recycling
system **25%**



“Wet Land Pond” in the
house **25%**

C. Waste



Composting of food waste where only less than 60% of waste will be disposed to be transported by the contractor **30%**



Recycle waste by proving at least 100kg of recycle material every month **30%**

D. Transportation



Using a hybrid / electric motorcycle / NGV car to work / work **25%**



Taking public transport / walking / public cycling / walking / bike rides for work and leisure purposes **30%**

E. Biological diversity



More than 50% of the area are covered by softscape / green **25%**

Soft green landscape in front of the house or perimeter planting at least 2m and above **30%**

MBSA BUILDING AUDIT

3. FUTURE WORKS AND NEXT STEP



FUTURE WORKS AND NEXT STEP

DETAIL ENERGY AUDIT

- ✓ Immediate
- ✓ Plan to start: April 2017
- ✓ Apply for audit grant with SEDA

ESTABLISH ENERGY COMMITTEE

- ✓ Concurrent
- ✓ Focus group on energy
- ✓ Establish energy policy
- ✓ Develop energy management program

INSTALL ENERGY SUB-METER

- ✓ After detail energy audit
- ✓ For strategic energy monitoring and analysis

DEVELOP ENERGY MANAGEMENT

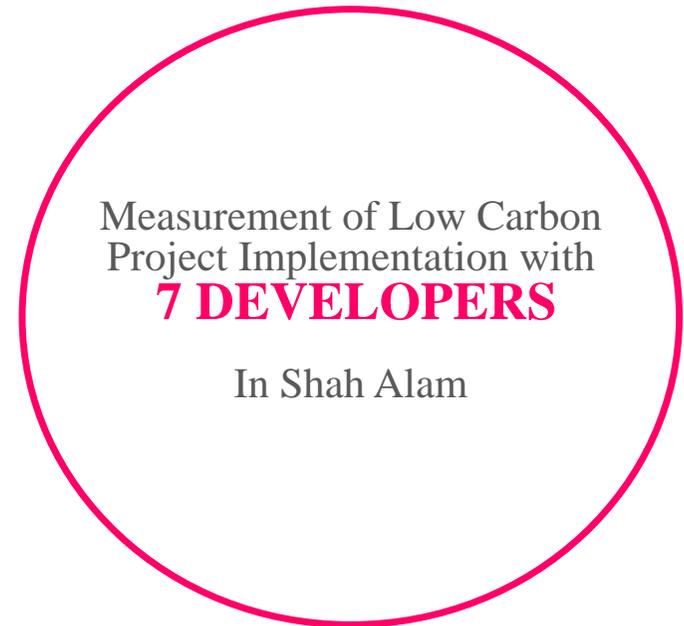
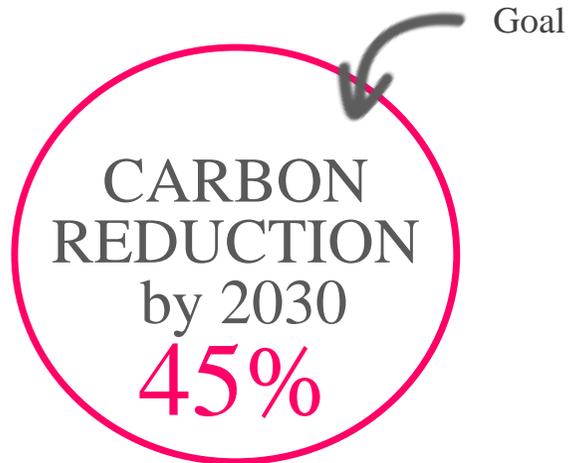
- ✓ Concurrent
- ✓ EnMS model
- ✓ ISO 50001 standard

LOW CARBON CITY INCENTIVES



- ✓ Proposed incentive scheme offered in tax rebate to all home owners for those practicing the green concepts in Shah Alam area

- ✓ Green road map
Low carbon city action plan
Strategic partner strengthening



- ✓ MOU between MGTC and MIP 8th June 2015



Malaysia Institute
of Planners

MINIZEEBEE PROGRAMME

PENGENALAN



APA ITU ZON BERSIH? 1

Satu kawasan yang telah dikenalpasti dan dipilih berdasarkan tahap kebersihan yang tidak memuaskan untuk dinaiktaraf sebagai kawasan bersih.

MATLAMAT 2

Untuk memupuk kesedaran dan budaya cintakan kebersihan melalui penglibatan komuniti, serta menjadikan negeri Selangor sebuah negeri yang paling bersih, berbanding negeri-negeri lain di Malaysia.

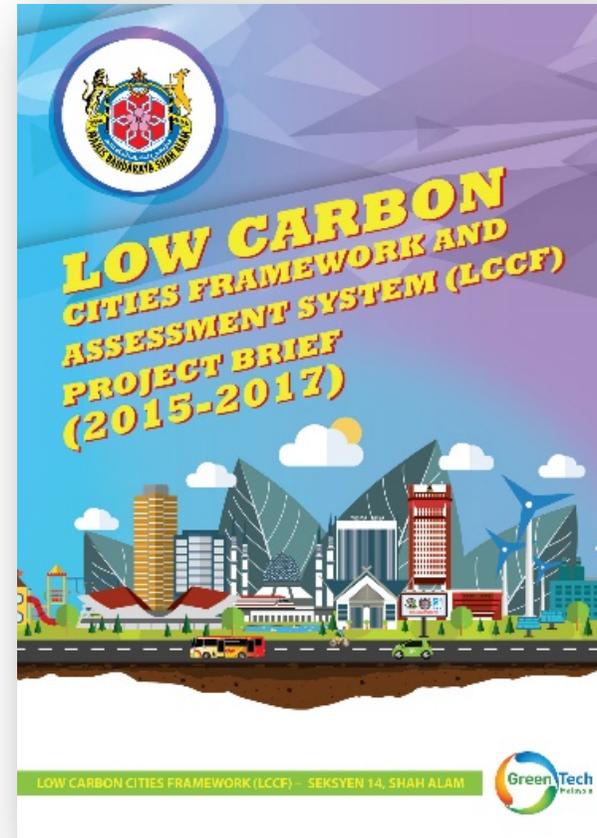
- 1) Competition for Green neighbourhood Award – Mini Clean Zone MBSA
- 2) Competition for all resident's Association
- 3) Objective to inculcate neighbourhood cleanliness as way of life & promote green lifestyle
- 4) To create the clean agenda as foundation of community safety and integration

SHAH ALAM CITY CENTRE RATING SYSTEM

OBJECTIVES

- ✓ To determine the baseline carbon emission of the selected MBSA area based on year 2015 (which will be compared with the final year carbon assessment in 2017 for Diamond Recognition by the Federal Government).
- ✓ To recommend **LCCF Provisional Certificate** to potential Projects :-
 - ▶ **Section 14, Shah Alam, Selangor.**

Carbon Reduction Level	Level of Achievement
100%	Carbon Neutral
70-99%	Best Practice 5 (BP5) 
50-69%	Best Practice 4 (BP4) 
30-49%	Best Practice 3 (BP3) 
10-29%	Best Practice 2 (BP2) 
1-9%	Best Practice 1 (BP1) 



▲ Project Brief Submitted in December 2016

Self evaluation result of

Shah Alam city centre - (section 14)



FUTURE PLAN OF

Shah Alam city centre - (section 14)



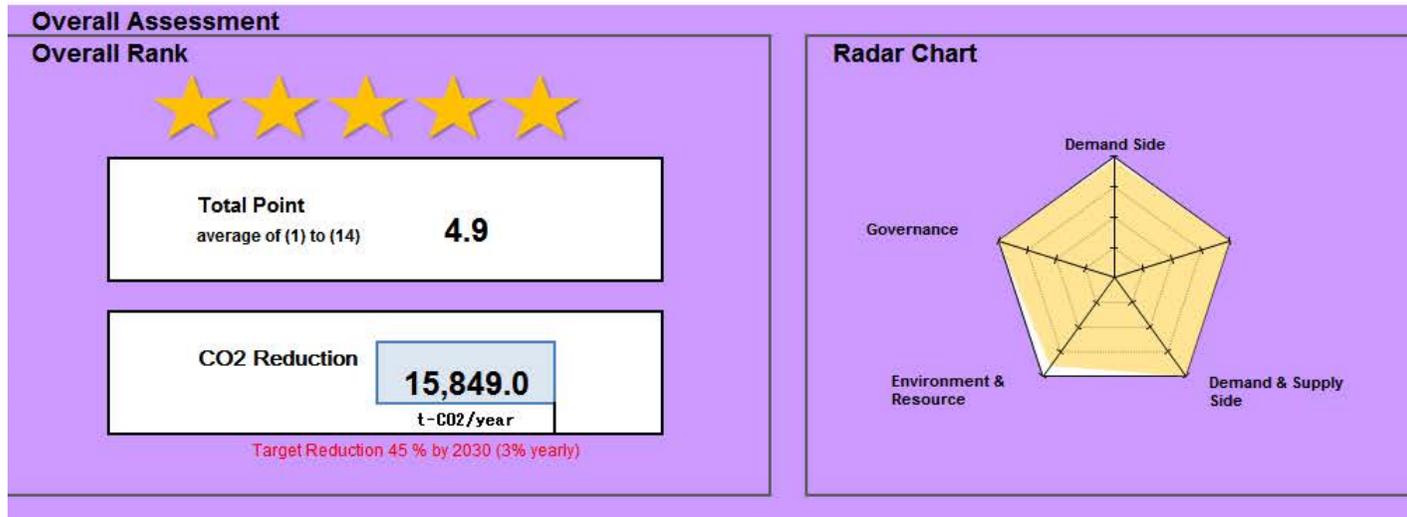
11.0

FUTURE PLAN OF SHAH ALAM 2030

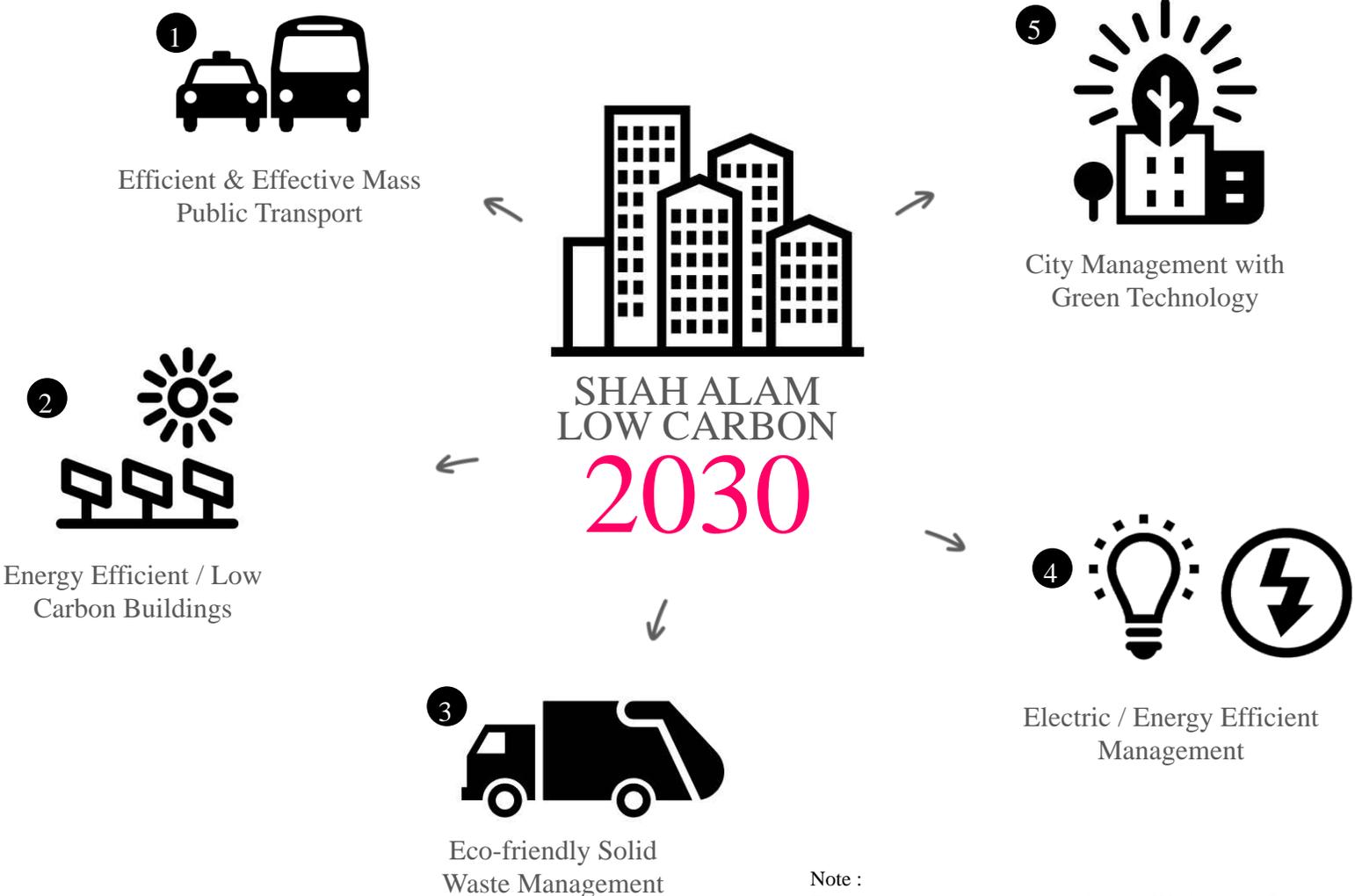
2016



2030



SHAH ALAM LOW CARBON ACTION PLAN 2030



Note :
The above action plan is the result of the Workshop in Bangi on 18 June 2015 organized by KeTTHA, Green Tech and MIP and was brought to the Management Meeting on September 9, 2015 and has been adopted since then.

MBSA2030 GOALS

MBSA 2030 Goals

1
2
3
4
5

1



Raises Sustainable City by 2030

Low Carbon Framework Measurement until 2030

2

Green Procurement Target: 5% Per Annum

4

Public Transport Target: Cost Saving Fuel 69% and maintenance 64%

Green Building (Green Evaluation)

TARGET:

- i. Certification of low carbon building.
- ii. Application of MS1525.
- iii. Reduction of electric energy consumption between 30-50%.
- iv. 70% Electric energy saving due to LED lighting changes.

3

5



Shah Alam - VIDEO

S h a h a l a m c i t y c e n t r e - (s e c t i o n 1 4)



THE END

S h a h a l a m c i t y c e n t r e - (s e c t i o n 1 4)

