



# SHAH ALAM

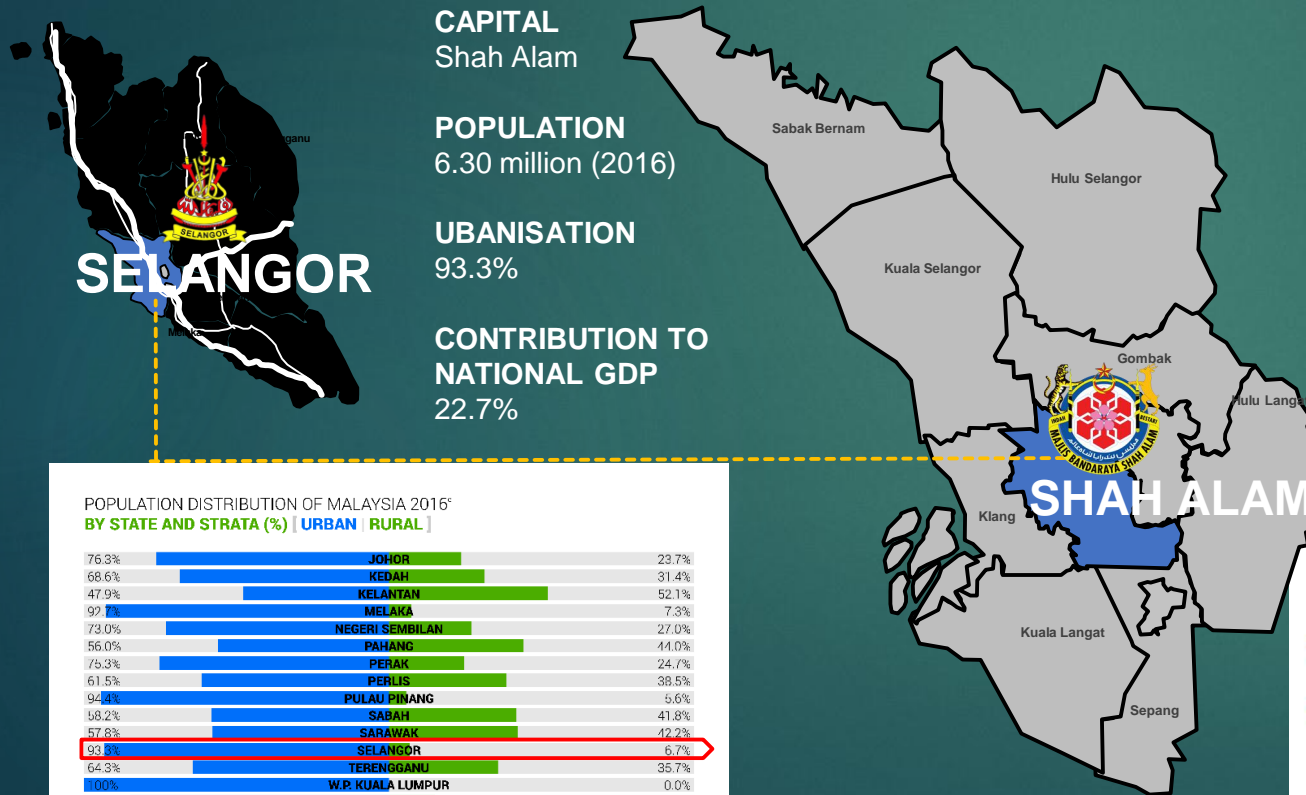
LOW CARBON CITY

# 2030



# SHAH ALAM BACKGROUND

Shah Alam is located within the district of Petaling and a portion of the district of Klang in the state of Selangor with total area 290.3 sq km. Due to its recent expansion, it is bordered by the cities of Subang Jaya and Petaling Jaya in the east, the district of Klang in the west, the district of Kuala Selangor and Selayang in the north, and the district of Kuala Langat in the south. Shah Alam is also one of the major cities within the Klang Valley, an area in Malaysia comprising Kuala Lumpur and its suburbs, and adjoining cities and towns in the state of Selangor,



STREMLINE TO NUA & SDG



VISION

To transform Shah Alam into a **QUALITY, PEACEFUL, CONDUSIVE** and **RENOWNED CITY**

MISSION

Enhancing Delivery and Administration System to be an efficient, effective, competent and dynamic towards excellence.

INSIGHT

Making Shah Alam an excellent and world class city.

POPULATION DISTRIBUTION OF MALAYSIA 2016<sup>\*</sup>  
BY STATE AND STRATA (%) [ URBAN | RURAL ]

76.3%	JOHOR	23.7%
68.6%	KEDAH	31.4%
47.9%	KELANTAN	52.1%
97.7%	MELAKA	7.3%
73.0%	NEGERI SEMBILAN	27.0%
56.0%	PAHANG	44.0%
75.3%	PERAK	24.7%
61.5%	PERLIS	38.5%
94.4%	PULAU PINANG	5.6%
58.2%	SABAH	41.8%
57.8%	SARAWAK	42.2%
93.3%	SELANGOR	6.7%
64.3%	TERENGGANU	35.7%
100%	W.P. KUALA LUMPUR	0.0%
84.9%	W.P. LABUAN	15.1%
100%	W.P. PUTRAJAYA	0.0%

Percentage Share to Malaysia's GDP



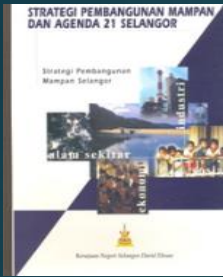
AREA:  
290.3 SQKM (29030 Ha)

DISTRICT :  
Petaling District and Part of Klang

POPULATION:  
669,894 People (2018)

TAX INCOME :  
RM434,406,160 (2018)

# MBSA TOWARDS SUSTAINABILITY



AGENDA 21  
SELANGOR

SHAH ALAM PILOT PROJECT  
PHASE 2 FOR MURNInets

SHAH ALAM  
REVIEW LA21  
ACTION PLAN

APEC  
LOW-CARBON  
MODEL TOWN  
PROJECT PHASE 7



IGEM 2019  
(11 AWARDS  
RECEIVED)

1998

2000

2004

2006

2010

2015

2017

2018

2019

2020

LA 21  
SHAH ALAM

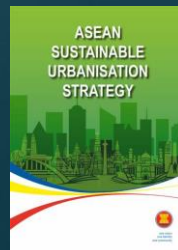
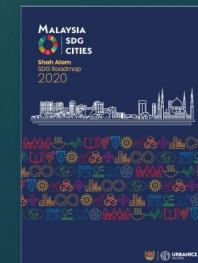
LA21 AT ALL LOCAL 12  
AUTHORITY IN SELANGOR

SHAH ALAM LCCF

START PROJECT AFRC  
UNDER IGES :  
PROJECT PROPOSAL

SHAH ALAM SDGs  
ROAD MAP

ASUS PROJECT  
PARTIPATE CITY  
REPRESENTATIVE  
FOR MALAYSIA





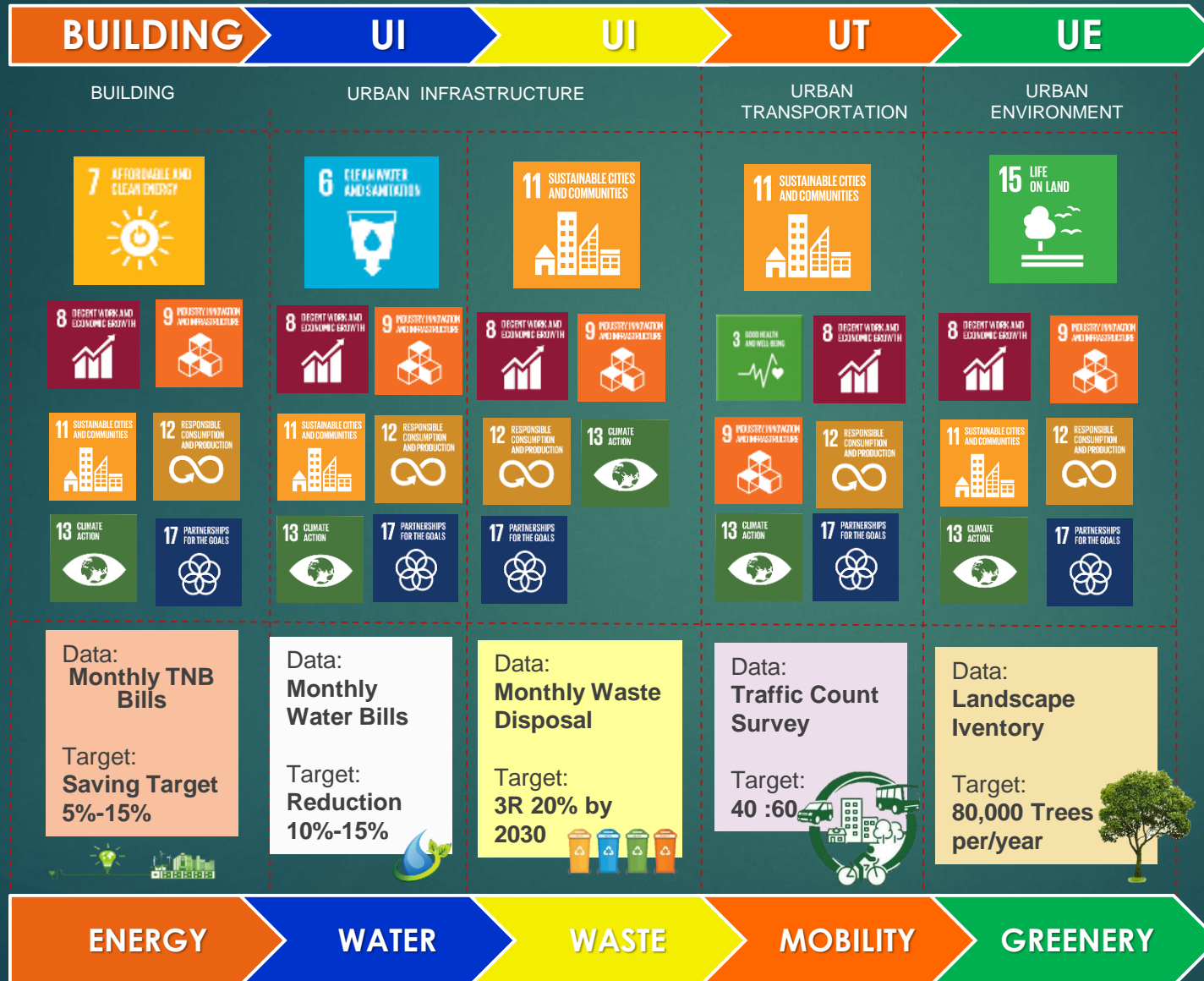
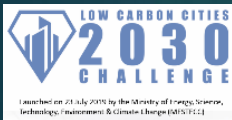
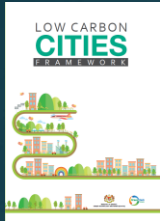
# MBSA COMMITMENT

MBSA is committed to implement LCCF program that anchored from 4 GHG Reduction element. MBSA aimed to reduced GHG with minimum 3% yearly target from 2015 to 2019. While, MBSA final mission to fulfill National Carbon Reduction of 45% by 2030.










# LCCF ELEMENT

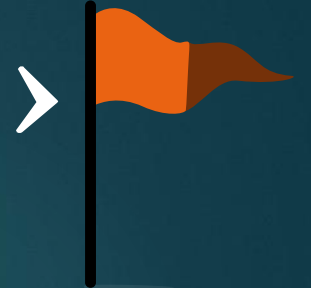
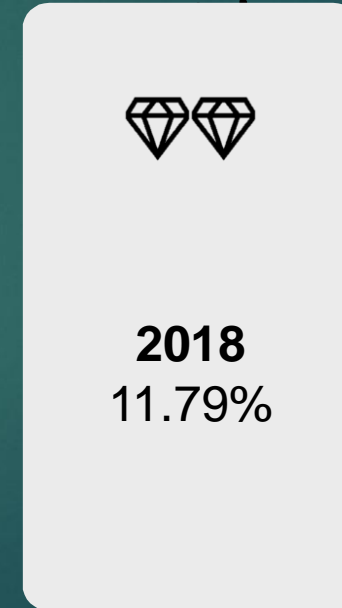
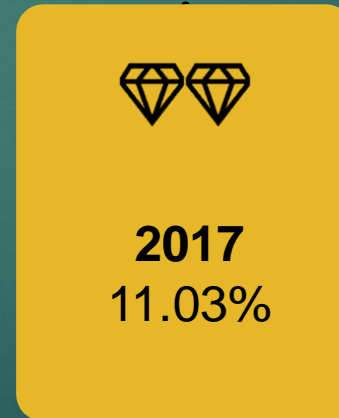


LCCF DELIVERING 10 SDGs GOALS



# CARBON ASSESSMENT PERFORMANCE

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) 



# SHAH ALAM PILOT PROJECT

## SECTION 14 TOWN CENTER

City Based : 4 Elements  
159.89 Hectares / 395 Acres



23  
Buildings

Year of **2015**  
Total Number of Building  
**12/23 units**  
(52%)

Year of **2016**  
Total Number of Building  
**20/23 units**  
(86%)

In **2017**  
**23 Premise from**  
**23 Premise (100%)**  
Smart Partnership / Strategic Partners

Unofficial 2019  
results

YEAR	2015	2016	2017	2018	2019
TOTAL EMISSIONS (P)	60,474.94	57,914.37	53,798.45	53,341.93	47,683.36
BUSINESS AS USUAL (B)	60,474.94	60,474.94	60,474.94	60,474.94	60,474.94
REDUCTION ACHIEVED (B-P)		2,560.57	6,676.49	7,133.00	12,791.58
PERCENTAGE,% REDUCTION (B-P)/B		4.23%	11.04%	11.79%	21.15%
DIAMOND RECOGNITION	BASELINE ONLY	1 DIAMOND	3 DIAMOND	3 DIAMOND	3 DIAMOND



# CARBON TRACKING

## ANNUAL ELECTRICITY CONSUMPTION (in kWh)

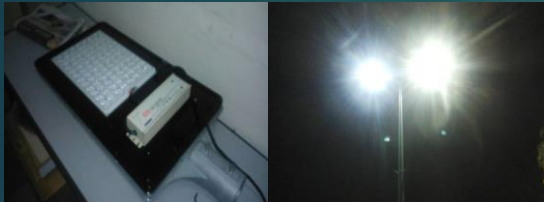


NO.	PARTNER	2015	2016	2017	2018	2019
1	MAYBANK	949,355	1,105,504	1,002,007	1,851,000	1,898,728
2	MENARA AFFIN / MENARA SERBA DINAMIK	4,106,610	4,114,050	4,119,430	3,987,667	4,028,543
3	SHAH ALAM CONVENTION CENTRE	2,701,503	2,590,657	2,244,510	2,124,813	2,047,507
4	MUZIUM	945,329	841,441	1,045,002	1,075,155	993,051
5	LAMAN BUDAYA	1,967	3,117	10,373	1,087	561
6	GALERI SHAH ALAM	42,141	43,786	29,173	25,704	32,350
7	AVISENA SPECIALIST HOSPITAL	5,592,955	5,520,120	5,239,541	5,193,054	5,311,308
9	PLAZA PERANGSANG	3,908,111	4,520,677	4,022,356	3,676,479	3,544,380
10	GRAND BLUEWAVE SHAH ALAM	6,621,996	6,329,802	6,771,363	6,407,661	6,202,986
11	WISMA MBSA	7,771,523	8,119,468	7,426,075	7,481,021	7,057,330
12	MENARA MRCB	3,333,579	4,471,013	3,548,455	3,351,816	3,153,768
13	BANGUNAN DARUL EHSAN	4,031,838	4,172,541	4,164,937	4,287,986	4,397,060
14	BANGUNAN UMNO SELANGOR	1,019,093	1,075,120	1,062,344	1,139,477	48,341
15	JABATAN AUDIT NEGARA SELANGOR	258,195	249,865	231,104	210,013	241,329
16	WISMA PKPS	2,153,700	2,258,640	2,060,980	1,841,390	192,065
17	MASJID SHAH ALAM	2,406,021	3,197,736	2,961,256	3,050,297	2,510,992
18	PEJABAT POS	640,486	741,775	660,771	590,500	668,749
19	HENTIAN PUSAT BANDAR	9,024	12,002	11,056	10,499	12,276
20	PLAZA ALAM SENTRAL	13,075,765	13,213,436	11,929,846	11,778,622	10,019,167
21	SACC MALL	4,726,170	4,647,990	4,172,755	3,873,229	3,642,838
22	PLAZA ANGGERIK	944,239	906,473	835,015	744,374	661,384
23	KOMPLEKS PKNS	8,085,574	8,288,009	8,128,623	8,842,067	9,615,186
TOTAL		73,325.17	76,423.22	71,676.97	71,543.91	66,279.90
		54,773.90	53,037.72	49,743.82	49,651.47	45,998.25
Occupancy		8,957	8,957	8,957	8,957	8,957
% Reduction		Baseline	-4.23%	2.25%	2.43%	Unofficial results 9.61%



# MBSA LOW CARBON INITIATIVES

## ENERGY



Location: Main thoroughfare at city centre  
Estimated cost reduction from energy consumption is by **50%**



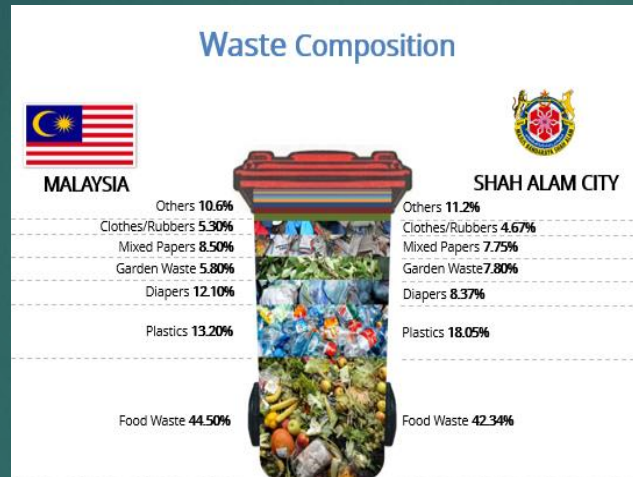
- Data Centre Retrofitting – GDC
- Energy efficient bulbs

## WATER

- Rainwater harvesting
- Installation of low flow head pipe
- Using the lake water for watering plan purposes

## WASTE

- Promote reduction on waste program



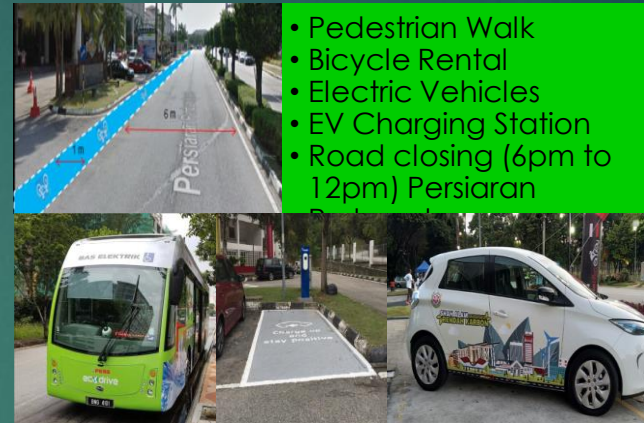
- Promote recycle program

Every Sunday is Recycling Day



Neighbourhood Recycling Centre

## MOBILITY



## GREENERIES



- Tree Planting Programme  
"Shah Alam Trees for Life"  
84,686 Nos of Trees lanted
- Greening The Cities  
- Along the roadsides  
- Monitor data
- Shah Alam Orchid Show

## TREE FOR LIFE



## URBAN FARMING



## Other initiatives undertaken by MBSA

- Community Involvement



- Green Taska



- Car free day



- Duta Hijau



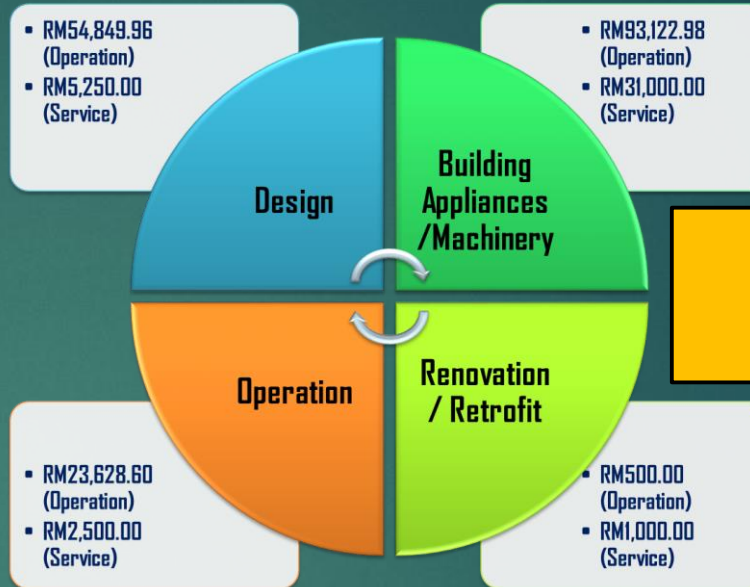


# MBSA LOW CARBON BUILDING ASSESSTMENT



Based on the assessment results in 2019, WISMA MBSA has achieved 7.90% reduction in carbon emissions equivalent to 454.64 tCO<sub>2</sub>

2 Diamond



**Total Saving :**  
**RM 211,851.54 / Month**  
**RM2,542,218.40 / Year**

Element	Total Carbon Emissions		Reduction Achieved		Remarks
	Baseline (B) tCO <sub>2</sub> /yr	Audit (P) tCO <sub>2</sub> /yr	(B-P) tCO <sub>2</sub> /yr	%	
Energy	5,634.91	5,191.83	443.08	7.86	Carbon Reduce
Water	39.46	39.70	-0.24	-0.61	Carbon Increase
Waste	81.80	70.00	11.8	14.42	Carbon Reduce
Mobility					
<b>Total Emissions</b>	<b>5,756.17</b>	<b>5,301.53</b>	<b>454.64</b>	<b>7.90%</b>	<b>Carbon Reduction</b>
Element	Total Carbon Sequestrations		Sequestration Increased		Remarks
	Baseline (B) tCO <sub>2</sub> /yr	Audit (P) tCO <sub>2</sub> /yr	(B-P) tCO <sub>2</sub> /yr	%	
Greenery & Water Bodies					
<b>Total Sequestrations</b>					



CERTIFICATE BY SEDA ON LOW CARBON BUILDING ASSESSMENT GREEN OPERATION



CERTIFICATE BY GREENTECH ON LOW CARBON BUILDING (2019)

Unofficial results :-

3 Diamond



853.39 tco<sub>2</sub>  
 14.91%



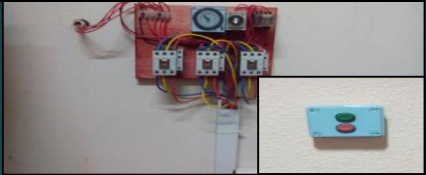
# MBSA LOW CARBON INITIATIVES

## ENERGY

- Building Energy Audit



- SMARTBus System



- Timer AHU System



- Timer Car Park Lighting



- Energy Saving Lift System



- Timer Restroom Fan System



- LED Lighting used at common area

## WATER

- Energy & Water Saving Pump System



- SPAH SYSTEM2.0



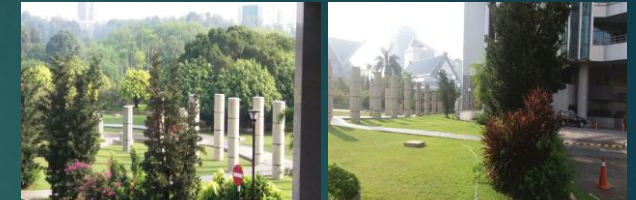
## WASTE

- Promote reduction on waste program
- Promote recycle program



- Recycling program between building in Town Center

## Other initiatives undertaken by MBSA



Roof Garden



Natural Ventilation Car Park



Natural Lighting & Building Orientation



District Cooling with Thermal Storage



# UiTM SHAH ALAM

## FRONTRUNNER CITY PROJECT

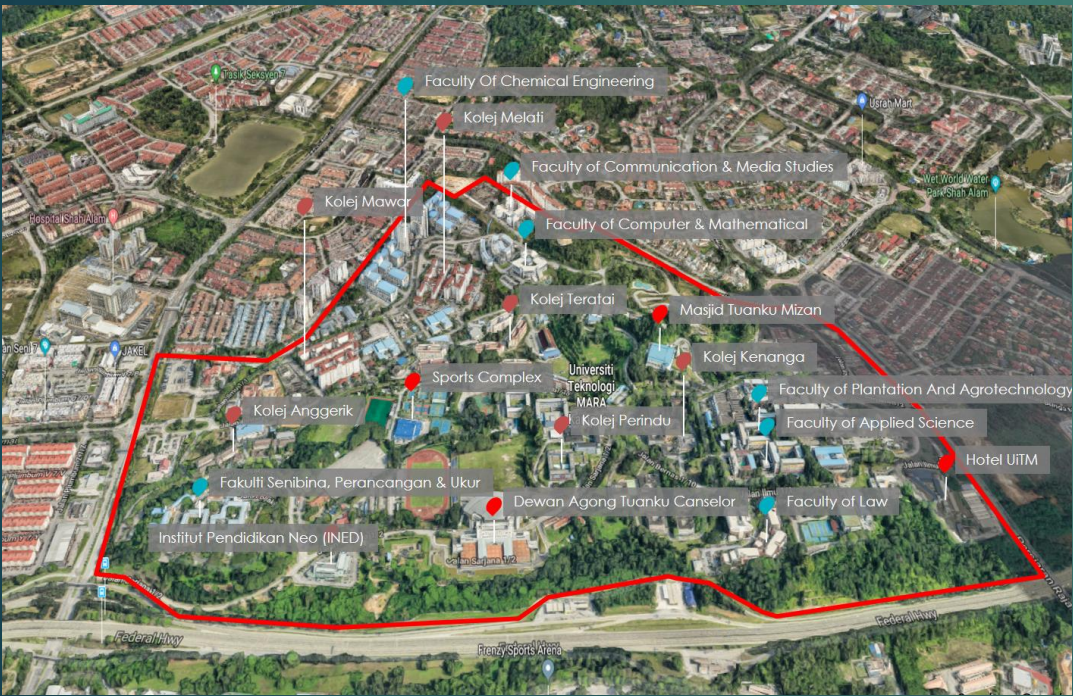
Expansion Area of Shah Alam Low Carbon City Framework  
To UiTM Campus, Section 1, Shah Alam

### SECTION 1, SHAH ALAM

162.27 Hectares / 400.99 Acres

30

Buildings



YEAR	2015	2016	2017	2018	2019
TOTAL EMISSIONS (P)	48,806.09	47,928.04	45,414.39	43,290.33	45,239.05
BUSINESS AS USUAL (B)	48,806.09	55,101.33	61,396.57	67,691.82	73,987.06
REDUCTION ACHIEVED (B-P)		7,173.29	15,982.19	24,401.48	28,748.01
PERCENTAGE,% REDUCTION (B-P)/B		13.02%	26.03%	36.05%	38.86%
DIAMOND RECOGNITION	BASELINE ONLY	3 DIAMOND	4 DIAMOND	4 DIAMOND	3 DIAMOND



# CARBON TRACKING

## FACULTY BUILDING

1. Faculty Of Architecture, Planning & Surveying
2. Faculty Of Chemical Engineering Laboratory
3. Faculty Of Business Management
4. Faculty Of Law
5. Faculty Of Art & Design
6. Faculty Of Hotel & Tourism
7. Faculty Of Computer & Mathematical Sciences
8. Faculty Of Dentistry
9. Faculty Of Sports Science & Recreation
10. Faculty Of Administrative Science & Policy Studies
11. Faculty Of Communication & media Studies
12. Faculty Of Electrical Engineering
13. Faculty Of Civil & Mechanical Engineering

## HOSTEL

1. Kolej Anggerik
2. Kolej Perindu
3. Kolej Kenanga
4. Kolej Cempaka
5. Kolej Seroja
6. Kolej Delima
7. Kolej Mawar
8. Kolej Melati
9. Kolej Teratai

## FACILITY

1. Academy Of Language Studies
2. ROTU
3. Stadium UiTM
4. Perpustakaan Tun Abdul Razak
5. Bangunan Budisiswa
6. Menara SAAS
7. Centre Of Islamic Thought & Understanding (CITU)
8. Innovation centre

## ANNUAL ELECTRICITY CONSUMPTION

			BASELINE				
No.	Partner	Unit	2015	2016	2017	2018	2019
1	Building	kWh	65153247.88	64176489.72	60230648.1	57,702,151	59,435,241
2	street light etc	kWh	1329658.12	1309724.28	1229196.9	1,177,595	1212964.1
TOTAL		MWh	66,482.91	65,486.21	61,459.85	58,879.75	60,648.21
		tCO2e	46,139.14	45,447.43	42,653.13	40,862.54	42,089.85
Occupancy	People		31,589.00	35,098.00	38,998.00	43,332.00	47,887
Net Floor Area	m2		1,416,000.00	1,416,000.00	1,416,000.00	1,416,000.00	1,416,000.00
BEI	kWh/m2		46.951	46.247	43.404	41.582	42.831
% Reduction		%		1.50%	7.56%	11.44%	8.78%

# UiTM LOW CARBON BUILDING ASSESSTMENT

Based on the assessment results in 2019, CANSELERI TUANKU SYED SIRAJUDDIN has achieved 3.43% reduction in carbon emissions equivalent to 42.79 tCO<sub>2</sub>



Element	Total Carbon Emissions		Reduction Achieved		Remarks
	Baseline (B) tCO <sub>2</sub> /yr	Audit (P) tCO <sub>2</sub> /yr	(B-P) tCO <sub>2</sub> /yr	%	
Energy	1,248.04	1,205.25	42.79	3.43%	Carbon Reduce
Water					
Waste					
Mobility					
<b>Total Emissions</b>	<b>1,248.04</b>	<b>1,205.25</b>	<b>42.79</b>	<b>3.43%</b>	
Element	Total Carbon Sequestrations		Sequestration Increased		Remarks
	Baseline (B) tCO <sub>2</sub> /yr	Audit (P) tCO <sub>2</sub> /yr	(B-P) tCO <sub>2</sub> /yr	%	
Greenery & Water Bodies					
<b>Total Sequestrations</b>					

1 Diamond



Unofficial results :-



3 Diamond



157.15 tco2  
12.40%



4 Diamond



738.48 tco2  
34.25%



4 Diamond



3,873.21 tco2  
28.50%



3 Diamond



51.56 tco2  
11.49%



2 Diamond



23.01 tco2  
6.77%



# SHAH ALAM PROJECT EXPENTION

Expansion Area of Shah Alam Low Carbon City Framework

SECTION 5, SHAH ALAM

45.68 Hectares / 4112.87 Acres



Seksyen 5 Baseline Year 2017 =  
8,910.76 Tonne CO2

PROVESIONAL CERTIFICATE 2019



JABATAN KEHAKIMAN SYARIAH SELANGOR (JAKES)

3

Buildings

YEAR	2017	2018	2019
TOTAL EMISSIONS (P)	8,910.76		
BUSINESS AS USUAL (B)	8,910.76	On going collecting data	
REDUCTION ACHIEVED (B-P)			
PERCENTAGE,% REDUCTION (B-P)/B			
DIAMOND RECOGNITION	BASELINE ONLY		



# MBSA NATIONAL & INTERNATIONAL JOURNEY

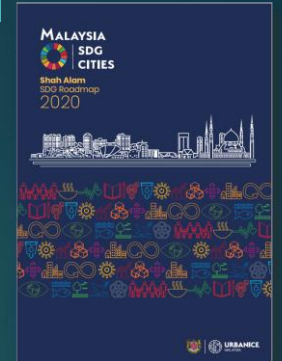
## 1<sup>st</sup> Regional Workshop



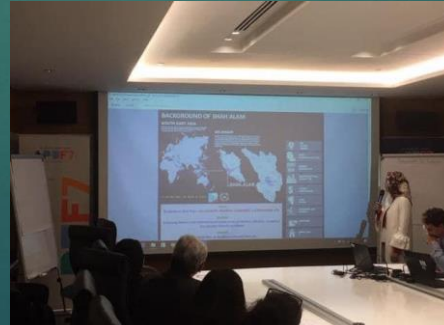
## 2<sup>nd</sup> Regional Workshop



## 1<sup>st</sup> National Workshop



## LOW CARBON AWARD CEREMONY 9 OCTOBER 2019; IGEN (11 AWARDS RECEIVED)

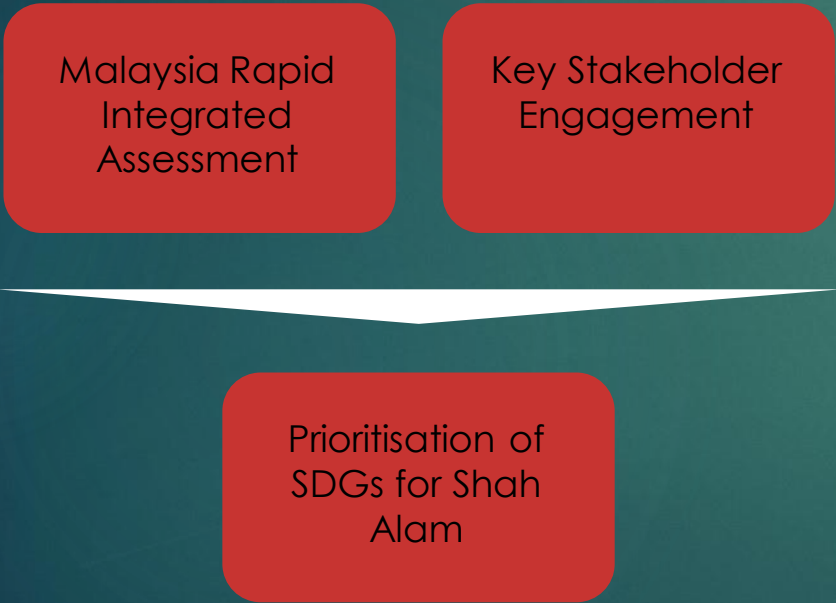




# SHAH ALAM ROADMAP

## Framework

In respect of localisation of SDGs in Malaysian cities and the vertical integration of the 3-tier governance paradigm (National, State and Local Council level), this action review was operationalised in two stages;



## Malaysia Rapid Integrated Assessment

**Phase 1:** provides a snapshot of the level of alignment between MBSA’s existing policies, strategic plans, initiatives, programs, projects and SDGs targets and areas for potential multisectoral coordination

**Phase 2 :** Key observations drawn from the assessment;

- I. How many SDGs targets have been prioritised?
- II. Assessment demonstrating following SDG targets less related, less relevant for the city
- III. Justification of the obtained result for better alignment the MBSA with SDGs

DOCUMENTS/ PROGRAMS & INITIATIVES		POLICIES	ACTIONS	STRATEGY	PROGRAMS & INITIATIVES	KPI	PROJECT	COST	PARTNERSHIP
Statutory Local Development Plan	Shah Alam City Council Local Plan 2035								
Programmes/ Projects & Initiatives	Pelan Perancangan Strategik Majlis Bandaraya Shah Alam 2016-2020								
	LA21/ Inisiatif Peduli Rakyat								



Enhances Access to Quality Services to address disparities

Promotes Environmental Sustainability to Mitigate Climate Change

Ensure inclusive Growth and development for all

# SHAH ALAM ROADMAP

## FIRST PHASE PRIORITISATION



## SECOND PHASE PRIORITISATION

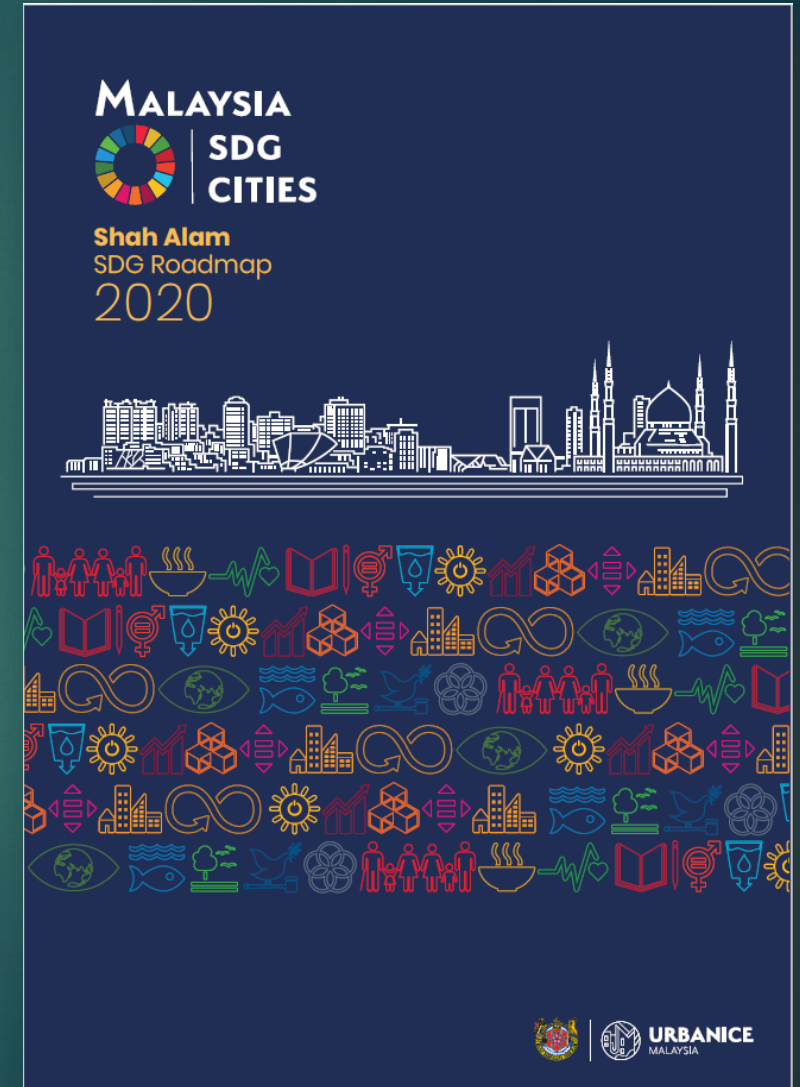
Enhances Access to Quality Services to Address Disparities



Promotes Environmental Sustainability to Mitigate Climate Change



Ensures Inclusive Growth and Development for All





*Thank You*

