7TH UCLG ASPAC CONGRESS
"INNOVATION-DRIVEN DEVELOPMENT FOR SUSTAINABLE CITIES"

13th September 2018

City Energy and Climate Action :

Seberang Perai's Experience on Climate Change

Speaker:

Ahmad Zabri Mohamed Sarajudin

Director of Crisis Management Department, Seberang Perai

SEBERANG PERAI
EXPERIENCE ON CLIMATE CHANGE

SEBERANG PERAI
EXPERIENCE ON CLIMATE CHANGE

3,256 houses affected

162 cars trapped

171,428 people affected

358 houses affected

15 cars affected

9,636 people relocated

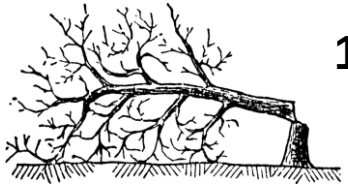
1 Person Died

12 days for recovery

15,942 tonnes Solid Waste collected

362mm rainfall within 6 consecutive hours

11,323 Warriors



1,194 trees uprooted

RM11.3M Economic Loss

PELITA
ROADSTONE
KLINIK ANJAR DR KHALID

SEBERANG PERAI

Aspiring City Of Tomorrow

Vision

Seberang Perai Resilient, Inclusive, Green, Competitive and Technology Driven Smart City

Mision

To provide urban service, development planning and infrastructure efficiently, effectively and responsive to the needs of the community in Seberang Perai

Corporate Value

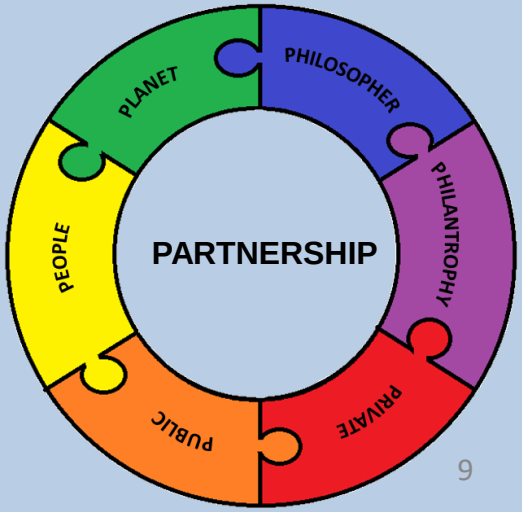
We work collaboratively across organization and communities to improve outcome, value for money and services

Guiding Principles

"City for all"

- *Improve governance and inclusiveness*
- *Accessibility and mobility*
- *No one should be excluded*
- *Gender responsive and participatory budgeting*
- *Universal Design*

7Ps INCLUSIVE PARTNERSHIP MODEL



STRATEGIC PLANNING

SUSTAINABLE DEVELOPMENT GOALS

LOW CARBON

CO_2

ENABLER

SMART

KEY RESULT AREA :

GREEN

RESILIENT

INCLUSIVE

COMPETITIVE

STRATEGIC PRIORITIES :

- SP01 Safe Environment
- SP02 High Quality Facilities And Infrastructures
- SP03 Healthy Lifestyle
- SP04 Green Development And Clean Environment
- SP05 Application Of New Technology
- SP06 Competitive Urban Economy
- SP07 Strengthening Culture And Heritage
- SP08 Resilient And Liveable City
- SP09 Community Involvement
- SP10 Inclusive And Impartial Urban Development

SDGs VALUES

PEACE

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

PEOPLE

1 NO POVERTY | 2 ZERO HUNGER | 3 GOOD HEALTH AND WELL-BEING | 4 QUALITY EDUCATION | 5 GENDER EQUALITY

PROSPERITY

7 AFFORDABLE AND CLEAN ENERGY | 8 DECENT WORK AND ECONOMIC GROWTH | 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE | 10 REDUCED INEQUALITIES

PLANET

6 CLEAN WATER AND SANITATION | 12 RESPONSIBLE CONSUMPTION AND PRODUCTION | 13 CLIMATE ACTION | 14 LIFE BELOW WATER | 15 LIFE ON LAND

PARTNERSHIP

11 SUSTAINABLE CITIES AND COMMUNITIES | 17 PARTNERSHIPS FOR THE GOALS

17 GOALS

169 TARGETS

230 INDICATORS

SUSTAINABLE DEVELOPMENT GOALS

SUMMARISED BASELINE DATA 2017

	DATA	UNIT
TOTAL EMISSION	12,643.738	kt CO2 e
SEQUESTRATION	-10,456.750	kt CO2 e
NETT EMISSION	2,186.988	kt CO2 e
PER CAPITA EMISSION	8.429	t CO2 e
NETT PER CAPITA EMISSION	1.458	t CO2 e

OBJECTIVES

- **GREEN** - Increase the quality of life for the people of Seberang Perai by improving the quality of environment of Seberang Perai
- **RESILIENT** - Increase the resilience level of Seberang Perai through DRR initiatives
- **INCLUSIVE** - Improve the mobility, connnectivity and accessibilty of Seberang Perai through transparent and inclusive governance
- **COMPETITIVE** - Enhancing Local Economic Development (LED) by leveraging into new industries

TARGETS / GOALS

- **SHORT TERM (2018 - 2020) :**

Disseminating informations and awareness on Low Emissions development and formulating Guidelines for development, baseline study, monitoring, measurement and verification processes.

- **MID TERM (2018 - 2022) :**

The target set by Seberang Perai City managers is to reduce percapita emission from 8.429 tonnes CO2eq in 2016 to 4.321 tonnes CO2eq in 2022 (50% reduction from BAU 2022).

- **LONG TERM (2018 - 2030) :**

The target set by Seberang Perai City managers is to reduce percapita emission further in order to achieve Carbon Neutral by 2030

LOW CARBON CITY

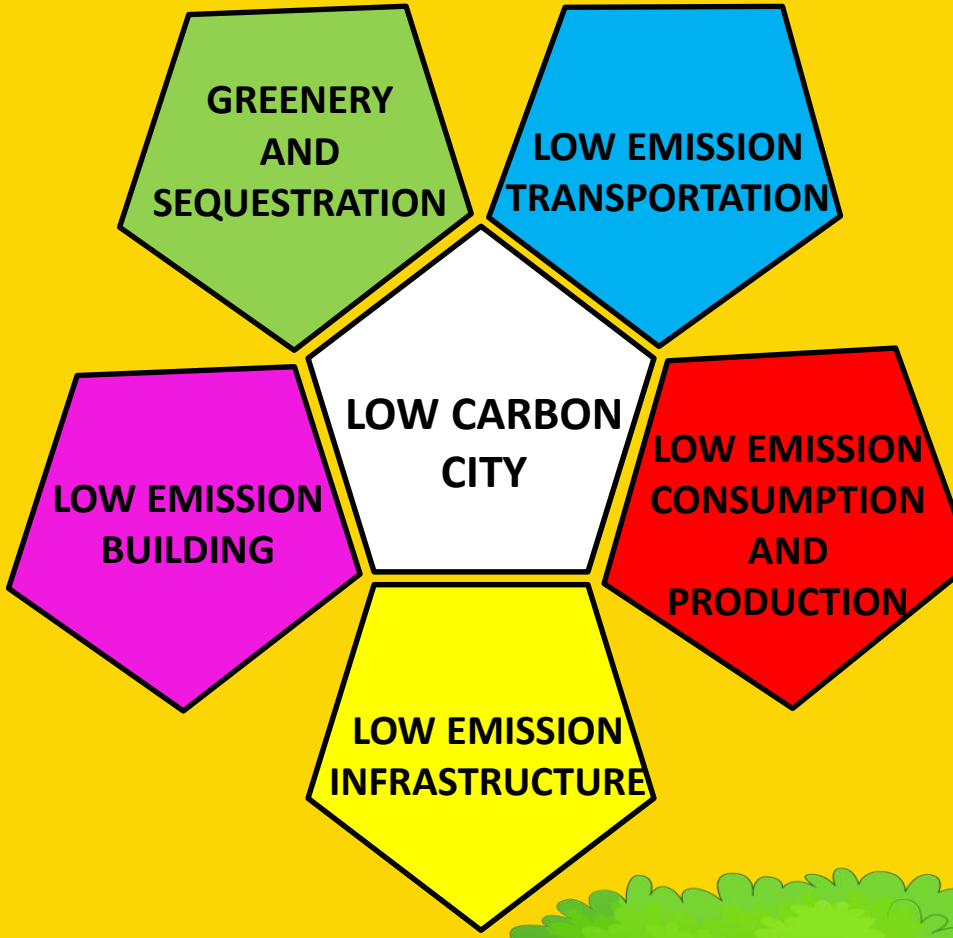
SEBERANG PERAI LOW CARBON CITY DEFINITION

“Low Carbon City is a city that are able to provide urban development within the city limit without compromising the needs of its people and at the same time are able to control the green house gases emission level below global average”

Dato' Sr. Hj Rozali Mohamud, Mayor of Seberang Perai

LOW CARBON CITY

SEBERANG PERAI LOW CARBON CITY
"GREENPRINT"



LOW CARBON CITY STRATEGY

STRATEGI 1 :

LOW EMISSION TRANSPORTATION

- Public Transportation
- Cycling
- Low Emission Vehicle(Hybird, Electric etc.)

STRATEGI 2 :

LOW EMISSION BUILDING

- Renewable Energy
- New Development : C1 Fast Track
- Existing Building : Incentives
- Energy Efficient Appliances (Energy reduction)

STRATEGY 3:

LOW EMISSION INFRASTRUCTURES

- Street Lighting – LED
- Roadside Table
- Interlocking Bricks (C&D Waste)
- Cycle friendly
- RE Dependent Public infrastructures

STRATEGY 4:

LOW EMISSION PRODUCTIONS AND CONSUMPTIONS

- 50% Waste Reduction
- 70% Recyling Rate

STRATEGY 5:

GREENERY AND SEQUESTRATIONS

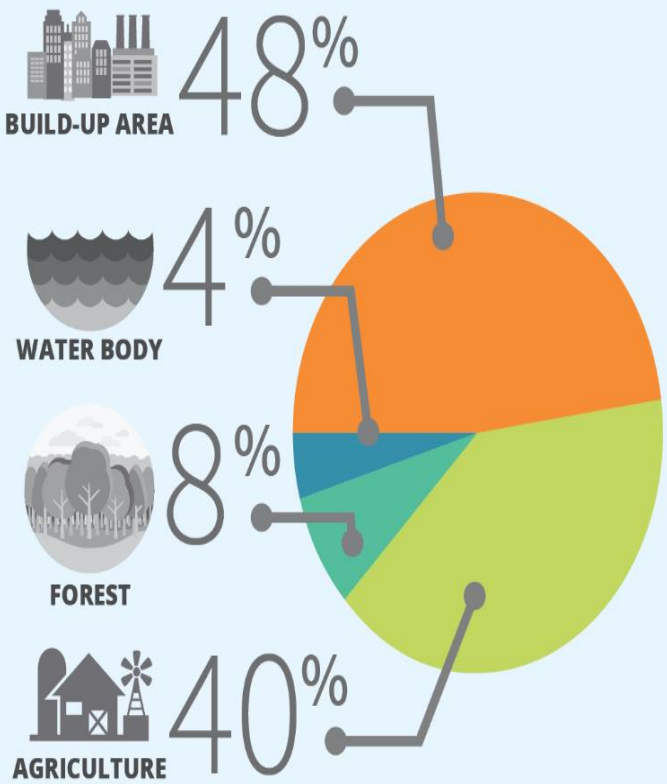
* City in a Garden Concept
* Forest and Mangrove Preservation

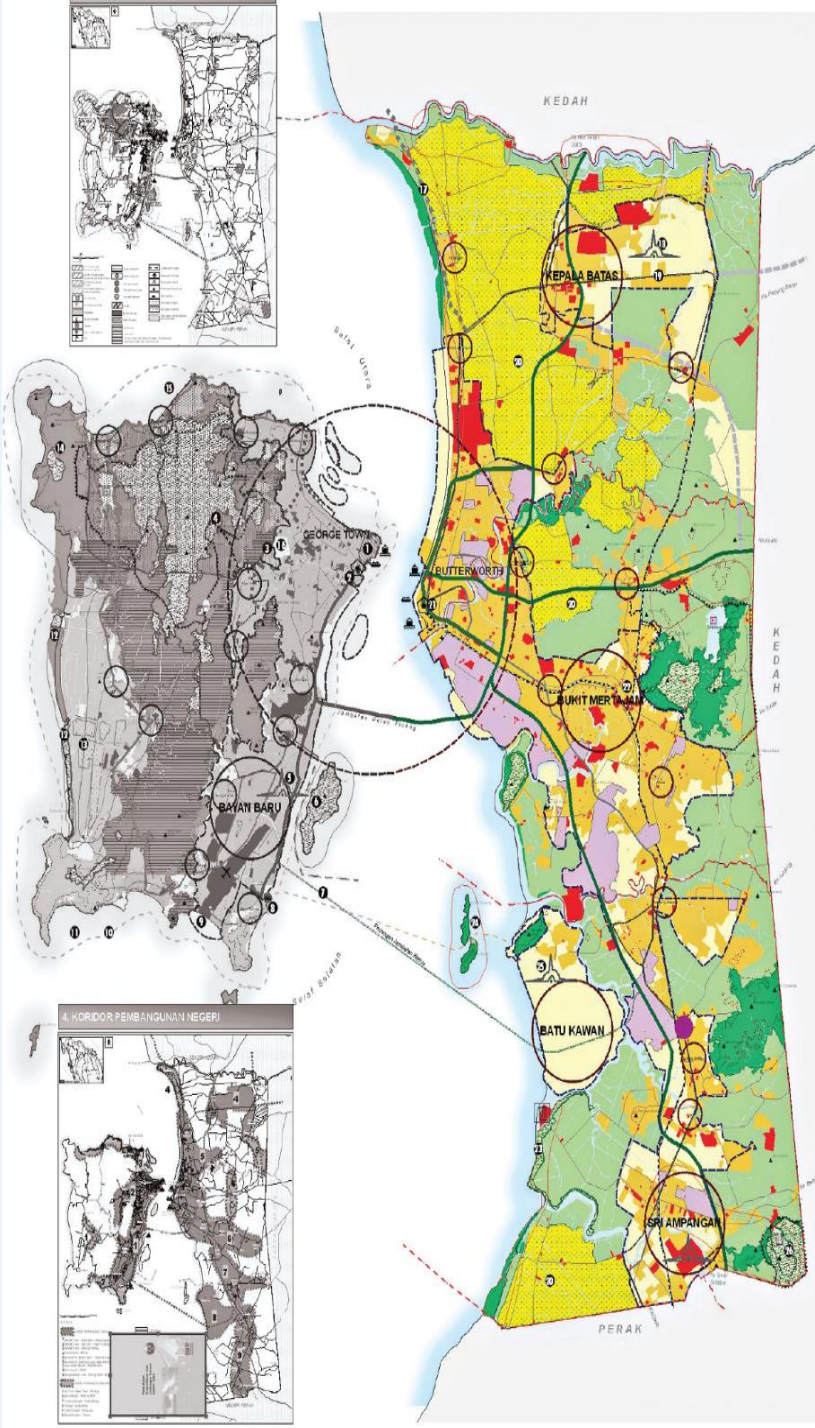
SEBERANG PERAI
LANDUSE ZONING

POPULATION
923,130
RESIDENT

SIZE
738
KILOMETER^2

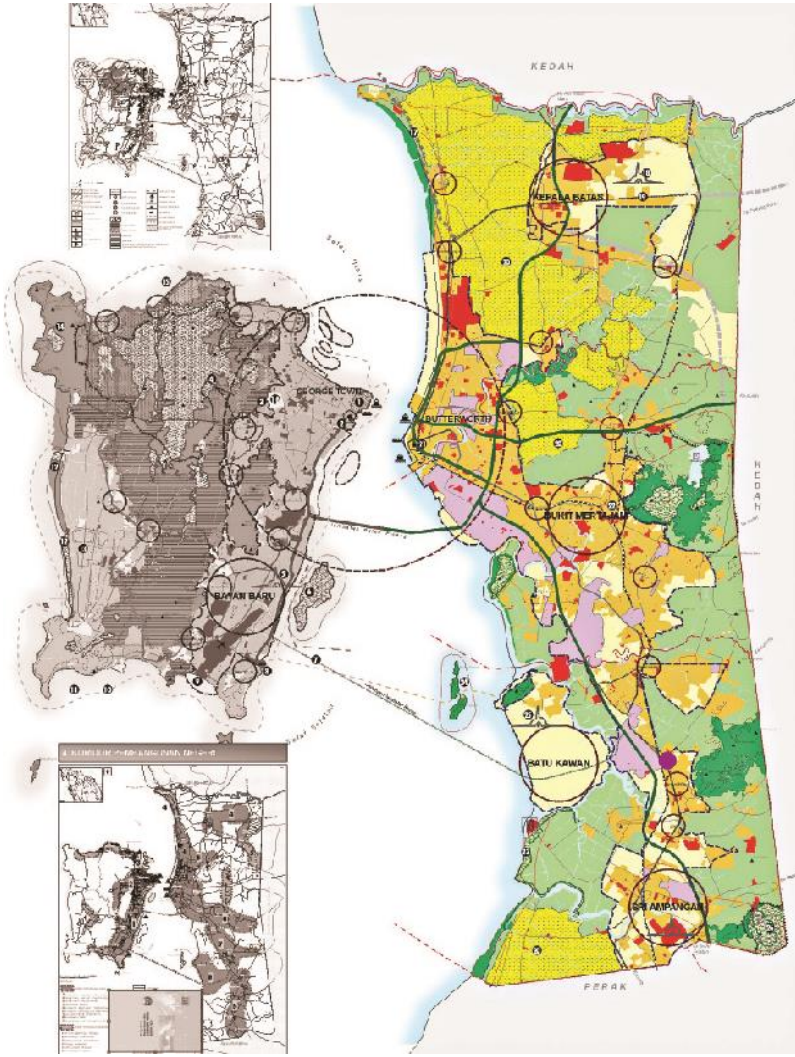
POPULATION GROWTH
1.7%
PER YEAR





SEBERANG PERAI | LAND USE ZONING

Residential 12% 8680 Hectare	**Commercial** 1% 975 Hectare	**Industrial** 4% 3273 Hectare	**Agriculture** 48% 35296 Hectare
Institution 5% 3407 Hectare	**Infrastructure** 1% 1061 Hectare	**Transportation** 9% 6386 Hectare	**Vacant Land** 6% 4179 Hectare
Forest 8% 5853 Hectare	**Open Space** 1% 1001 Hectare	**Water Body** 5% 3689 Hectare	**Total** 100% 73814 Hectare

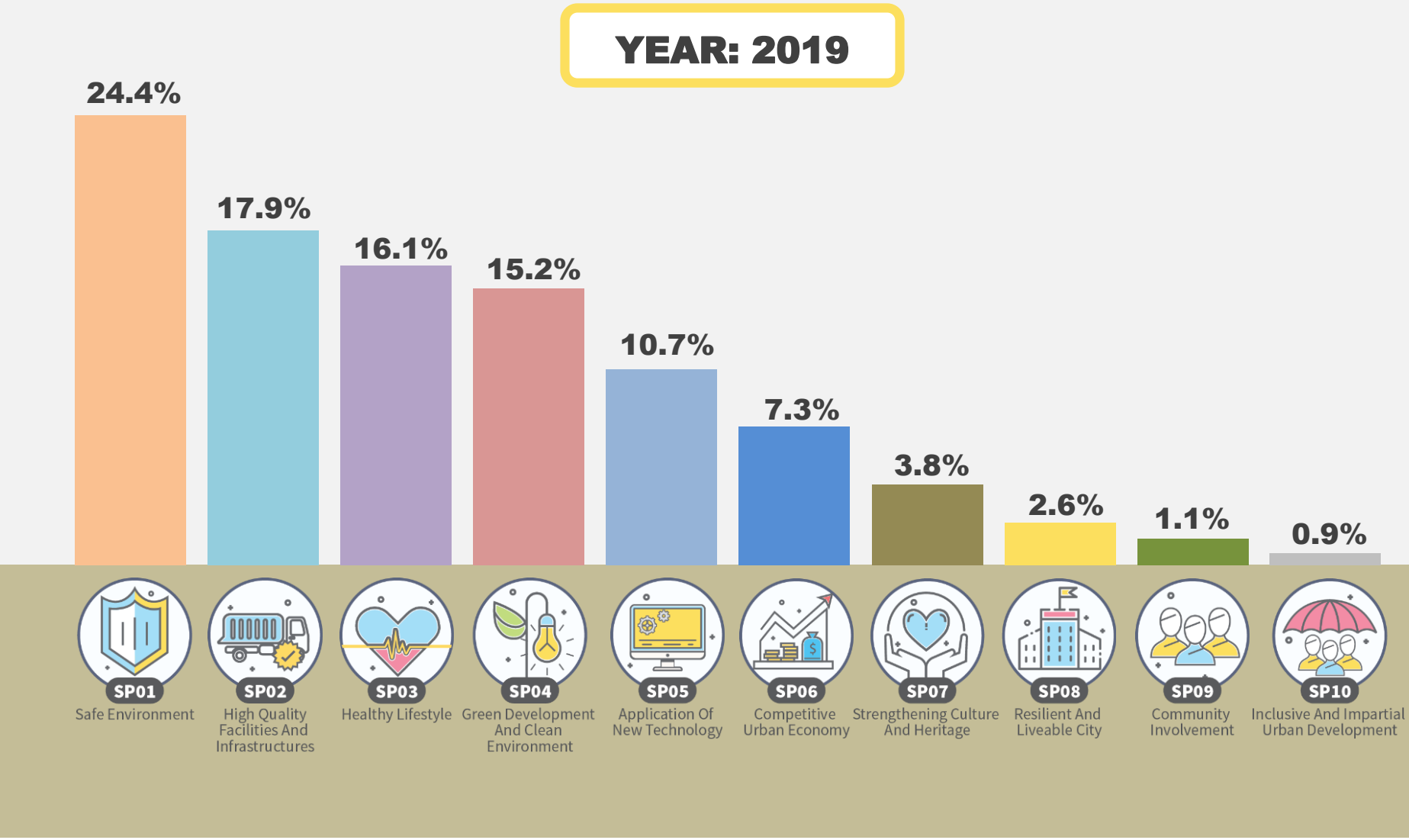


SEBERANG PERAI
ASPIRING CITY OF TOMORROW
INCLUSIVE

Respondents priority level of **MPSP** services

Seberang Perai
Strategic Plan
2018 - 2022

Respondents priority level of **MPSP** services

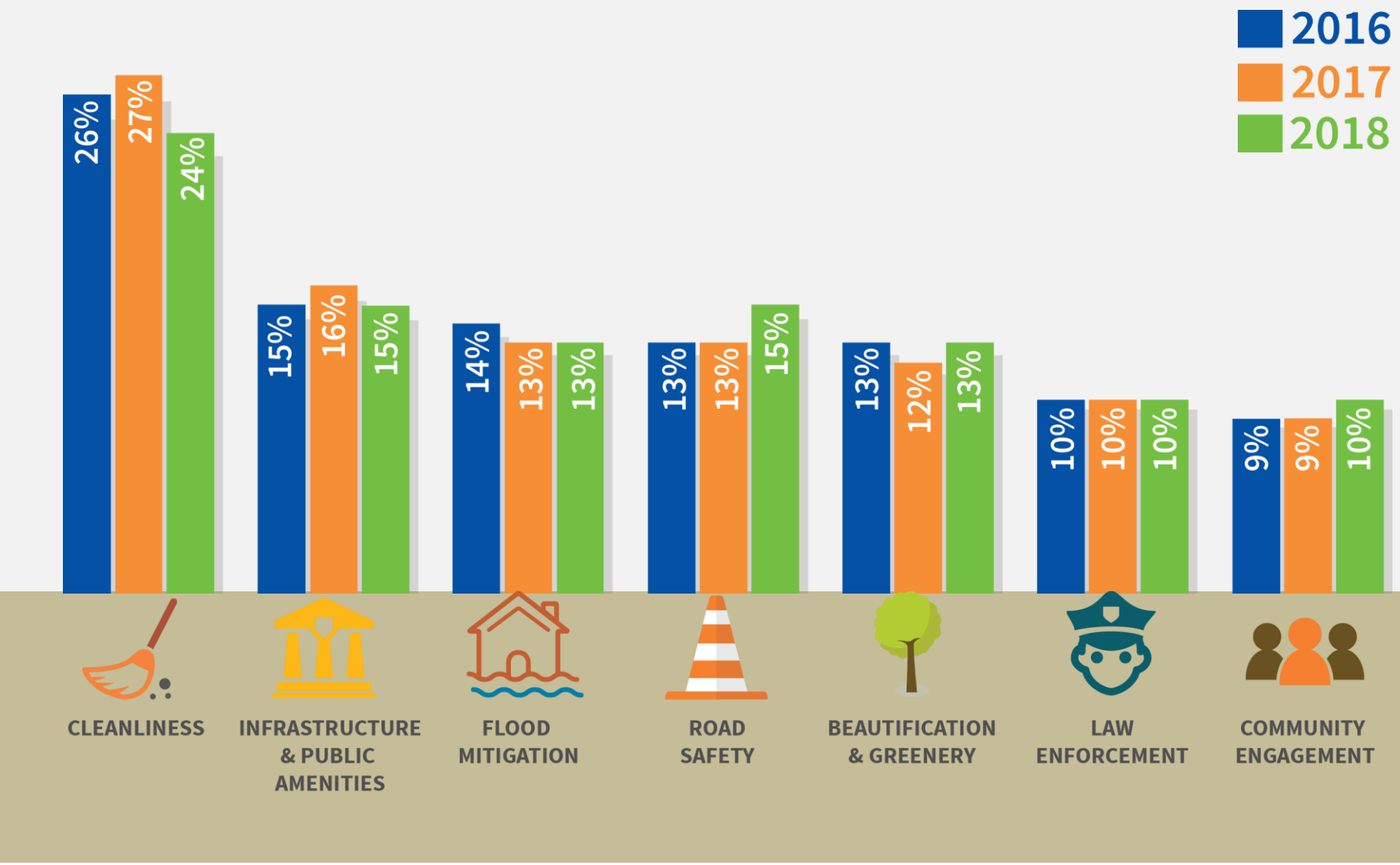


Townhall Session

Dialogue Budget

Dialogue Budget

Respondents priority level of MPSP services



Collabration Software
Slido as Q&A platform

Majlis Perbandaran Seberang Perai was live.
Published by Teradek [?] · 17 April ·

Program Integriti Bersama Peniaga
"Saya Peniaga Berintergriti"
Majlis Perbandaran Seberang Perai

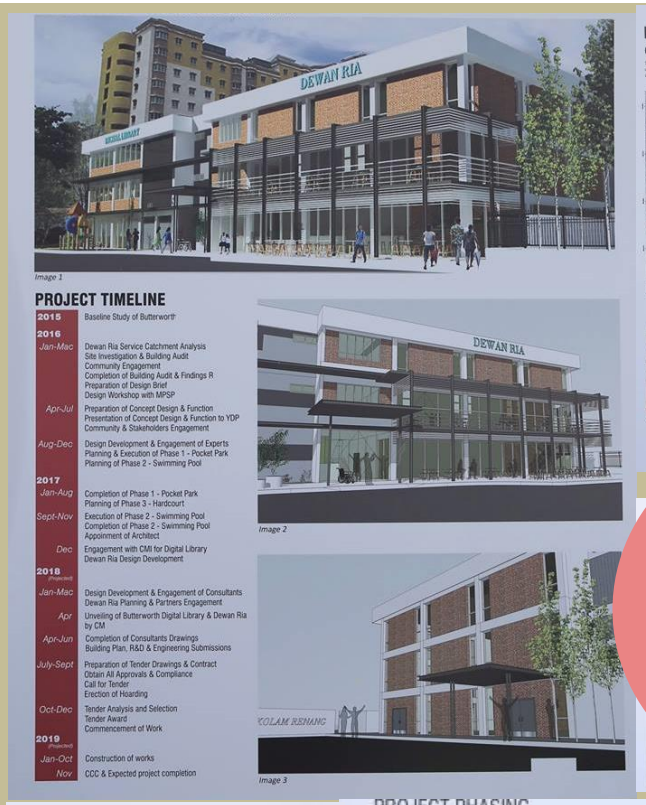
Panel :... See more

Butterworth Digital Library

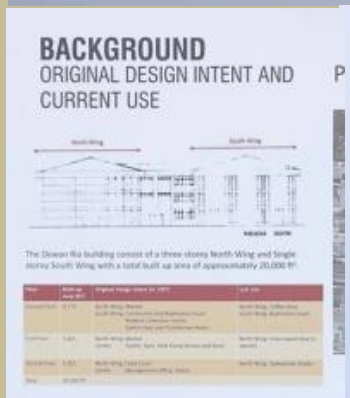
Creating the community of Seberang Perai towards the higher level education which results in making Penang State an excellence, tranquil and sustainable city.

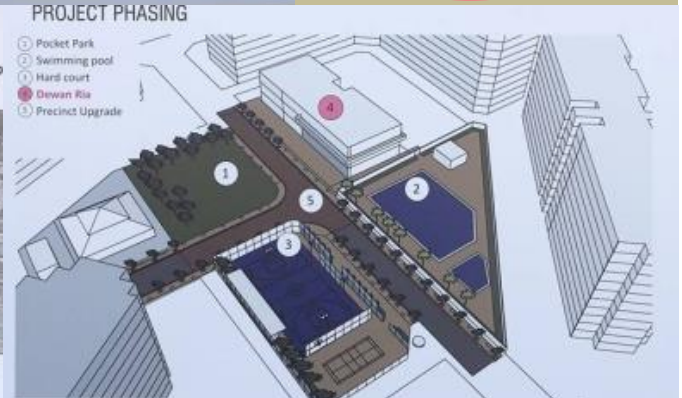
24 x 7 x 52 working culture

Walking distance to provide education for all.



Open to Public on **October 2019**





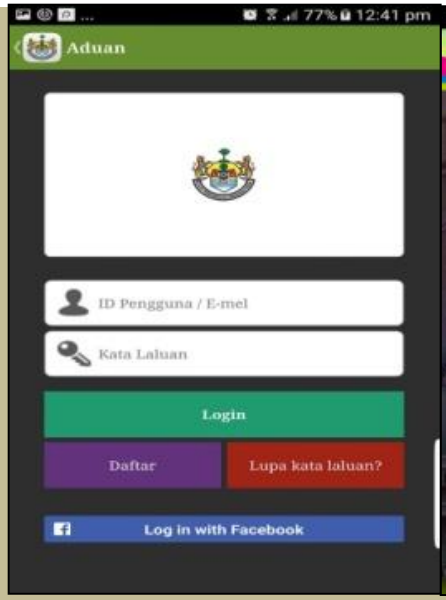
Smart Monitoring System **(SMS)**

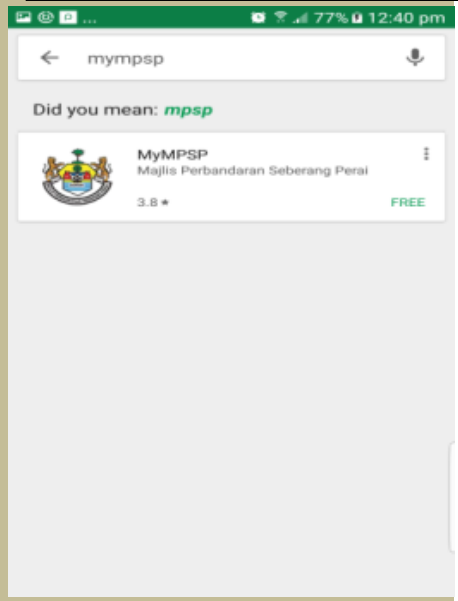
2013
- **Complaints** *(Convensional)*

2014
- **Facebook (MPSP Watch)**
- **Better Penang Apps**

2016
- **SMS**
- **SMS 2.0**

2017
- **SmartEye**
- **MyMPSP Apps**





HACKFEST MPSP - CYBER COUNTER

To connect people with ideas, expertise, experiences and networking to share and contribute in improving the MPSP's counter services.

Date	: 13-15 July 2018
Venue	: MPSP Tower, Bukit Mertajam
Theme	: "Cyber Counter"
Estimate Participant	: 100 people

GREEN
SEBERANG PERAI
ASPIRING CITY OF TOMORROW

Sustainable Energy

ISO 50001:2011 (EnMS) Energy Management System (15 August 2014).

C1 immediately issued if developer could reduce **15% energy saving** or implement any renewable energy.

LED Street Lights

Street Lights High Pressure Sodium Vapour (HPSV) Change To **Light Emitted Diode (LED)** Under MPSP Jurisdiction

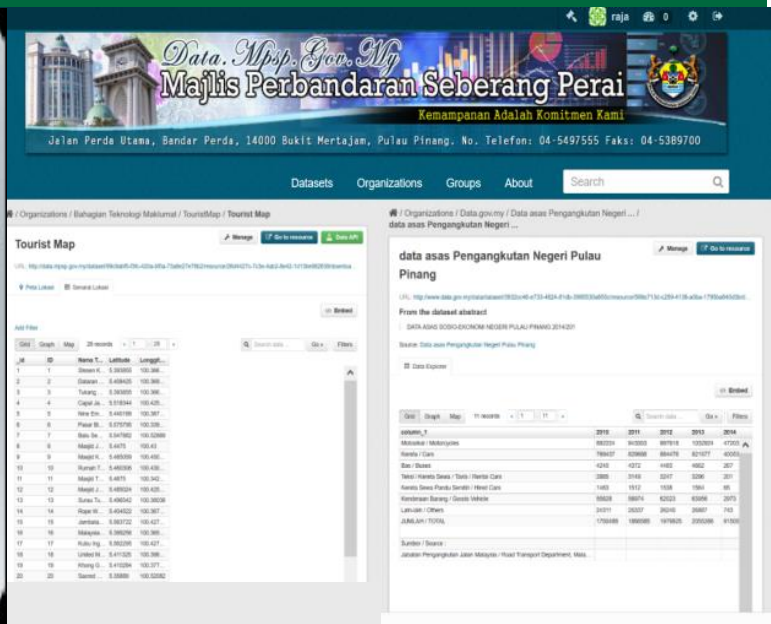
2018- **10,000** Street Lights

LED **HSPV**

Solid Waste Management

Big Data Analytic and IoT

- Use of **GPS** to optimize the use of Vehicles.
- Use of **BDA** to calculate and design solid waste projections for existing development and new developments.
- Establish database for solid waste management and recycling.
- Loading solid waste data and recycling into the Open Data MPSP portal



Solid Waste Management
GPS Monitoring

Solid **Waste**

GPS Tracking

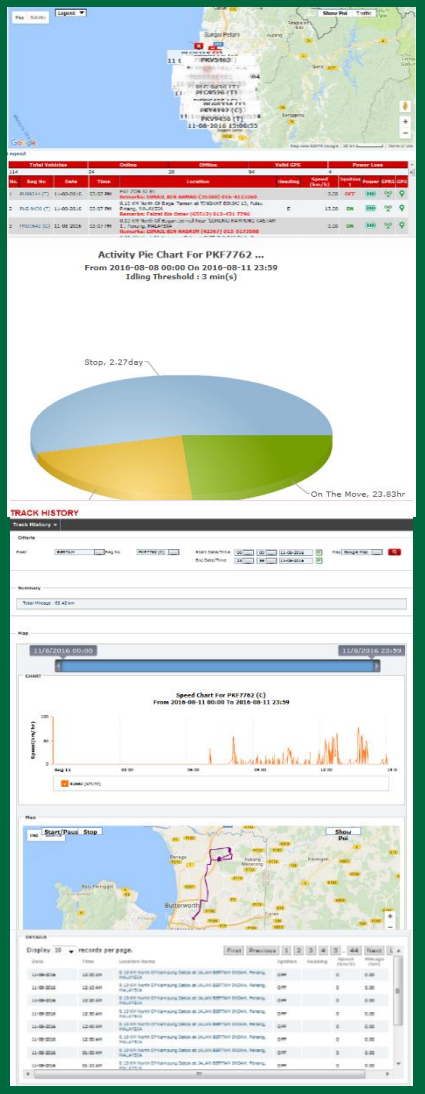
System Analysis

Statistik Lokasi Kutipan Sampah Yang Mengambil Masa Lebih Dari 15 Minit Untuk Pembersihan Jan-Dis 2015

Bil	Depoh	Jumlah Lokasi											
		Jan	Feb	Mac	Apr	Mei	Jun	Jul	Ogs	Sep	Okt	Nov	Dis
1	Kepala Batas	23	24	21	19	17	17	20	17	17	16	15	14
2	Tasek Gelugor	22	25	19	18	16	16	21	15	15	14	14	11
3	Bagan	21	27	17	17	16	16	20	14	14	14	13	13
4	Ampang Jajar	22	26	19	19	18	18	21	17	17	15	15	13
5	Berapit	22	29	20	19	19	18	21	18	17	16	14	14
6	Jalan Betik	23	31	21	21	19	19	22	18	18	17	15	15
7	Asas Murni	22	25	20	19	19	20	23	18	19	18	18	17
8	Jawi	23	26	22	22	21	21	24	21	20	18	18	18
	Jumlah	178	213	159	154	145	145	172	138	137	128	122	115

Report of Overflowing Waste

GPS Monitoring



Public Engagement

Education :

Trash2Treasure App *(learn how to segregate your waste in a fun way)*

Penang State Policy

Collaboration with **Smart Partner**

Penang State Government

MPSP

PENANG INSTITUTE making ideas work

PENANG GREEN COUNCIL

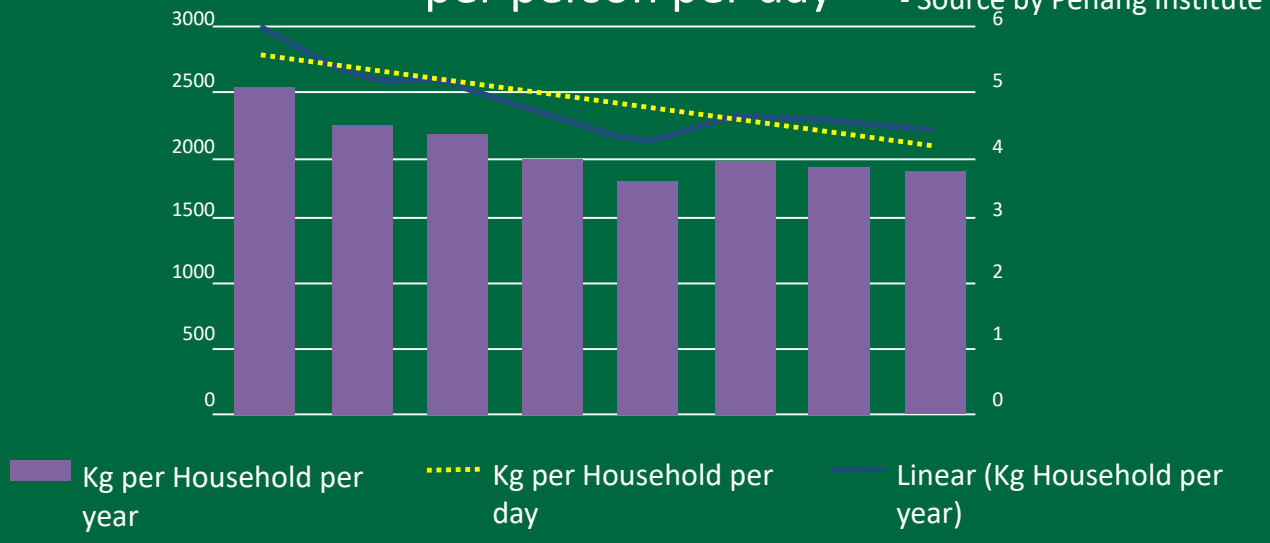
No **Plastic Bag**

No **Polystyrenes**

Segregationat Source

Solid Waste has reduced from 1.6kg to **1.3kg** per person per day

- Source by Penang Institute

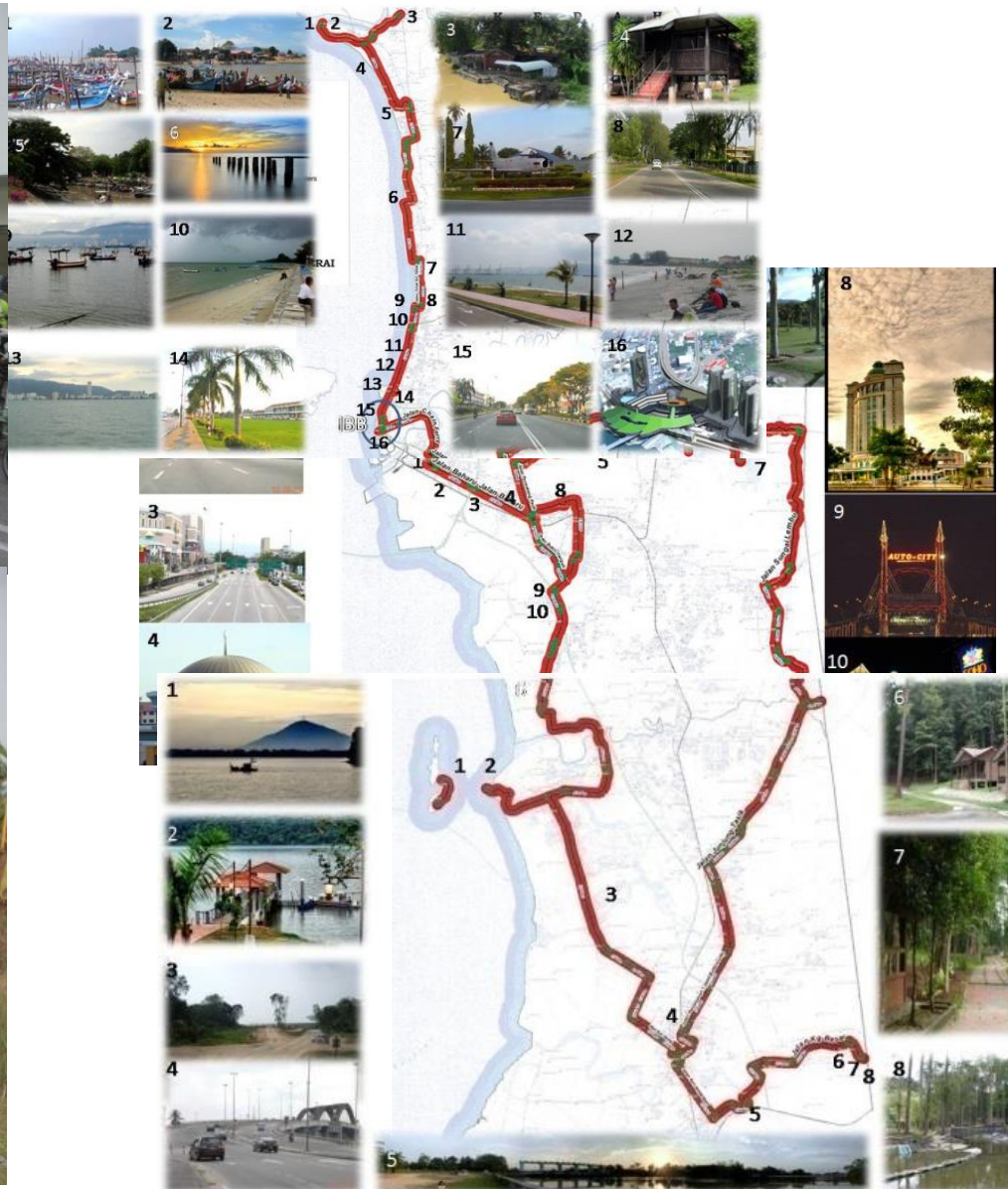


Upcycle Park

Seberang Perai Smart Consumption Model

GREEN SEBERANG PERAI
ASPIRING CITY OF TOMORROW

Cycling Friendly City



RESILIENT
SEBERANG PERAI
ASPIRING CITY OF TOMORROW

Live Streaming
Sign Language Interpreter

Majlis Perbandaran Seberang Perai was live.
18 November 2017 ·

Sesi "Townhall" pembentukan pelan strategik Seberang Perai 2018-2022 oleh Yang Berbahagia Dato' Sr. Haji Rozali B. Haji Mohamud, Yang Dipertua MPSP pada hari Sabtu, 18 November 2017.

#Townhall
#Live
#PelanStrategik
#MySeberangPerai

Your video is popular in Penang

Boost Post

77

4 Comments 37 Shares 1.8k Views

Majlis Perbandaran Seberang Perai was live.
Published by Teradek [?] · 25 January at 09:19 ·

People have watched this video for a total of 1.8k minutes

Boost Post

1k Views

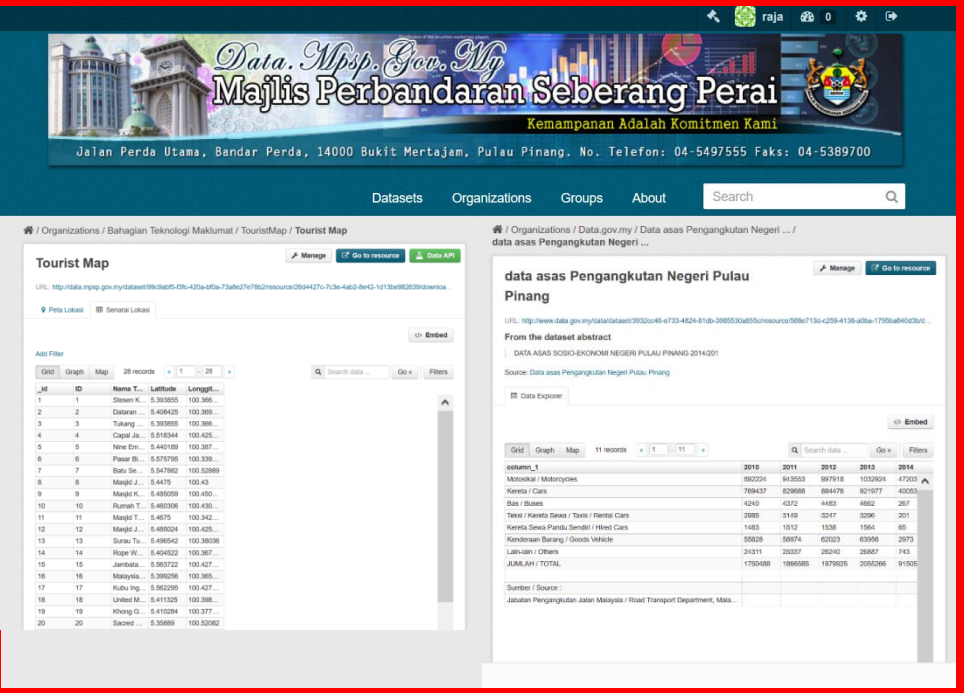
Like Comment Share

58

Top comments

15 shares

Open Data
15 Data Sets



1) Recycling Center
2) List Of Public Market
3) List Of Public Hall
4) The Location Of Night Market
5) Censor 3 Water Level
6) Schedule For Waste Collection According To The Location In Seberang Perai
7) 2015 Penang Tourism Statistics Publication
8) Penang Social Basic Data
9) Penang Health Basic Data
10) Penang Real Estate And Housing Basic Data
11) Penang Transportation Basic Data
12) Penang Infrastructure Basic Data
13) Tourist Map
14) Recycle Data
15) Hotel

Security and Safety

CONTROL ROOM

CCTV

TOTAL CCTV IN SEBERANG PERAI	
NORTHERN (SPU)	46 UNITS
CENTRE (SPT)	34 UNITS
SOUTH (SPS)	20 UNITS
TOTAL	100 UNITS

Security and Safety
Crisis Management Department

Dedicated team to response during disaster and crisis. This team is available for 24 hours everyday throughout the year. Equipped with multiple vehicles and equipments to tackle any sort of municipal crisis.

Seberang Perai Disaster Management Plan highlight the role of every members of the community.

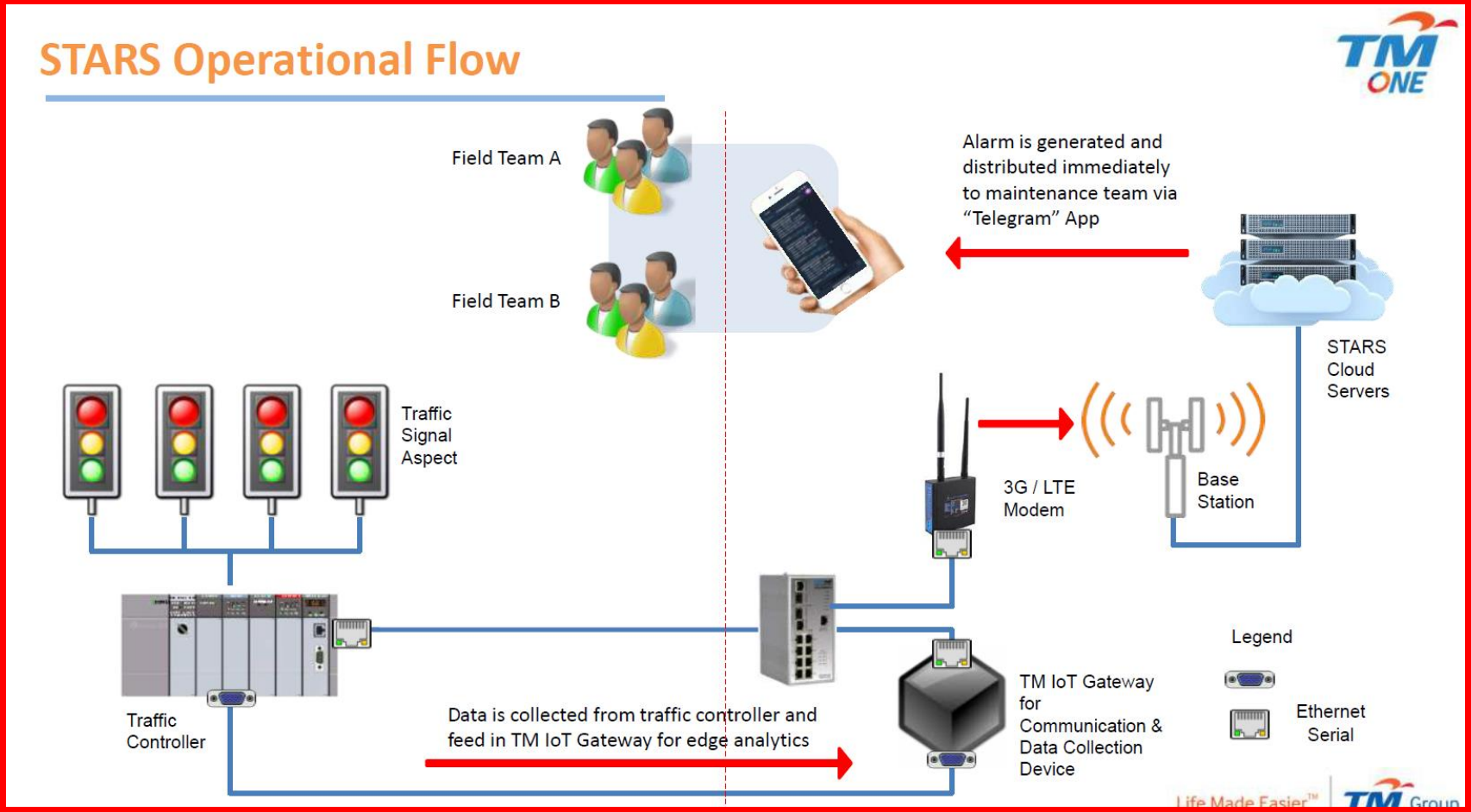
Engagement and partnerships with the stakeholders are the key factors in building a resilient Seberang Perai

168 skill workers work in shift to enhance the preparedness in dealing with disaster and crisis.

This workers have been given adequate training regarding disaster management and responses.

Penang Transport Masterplan

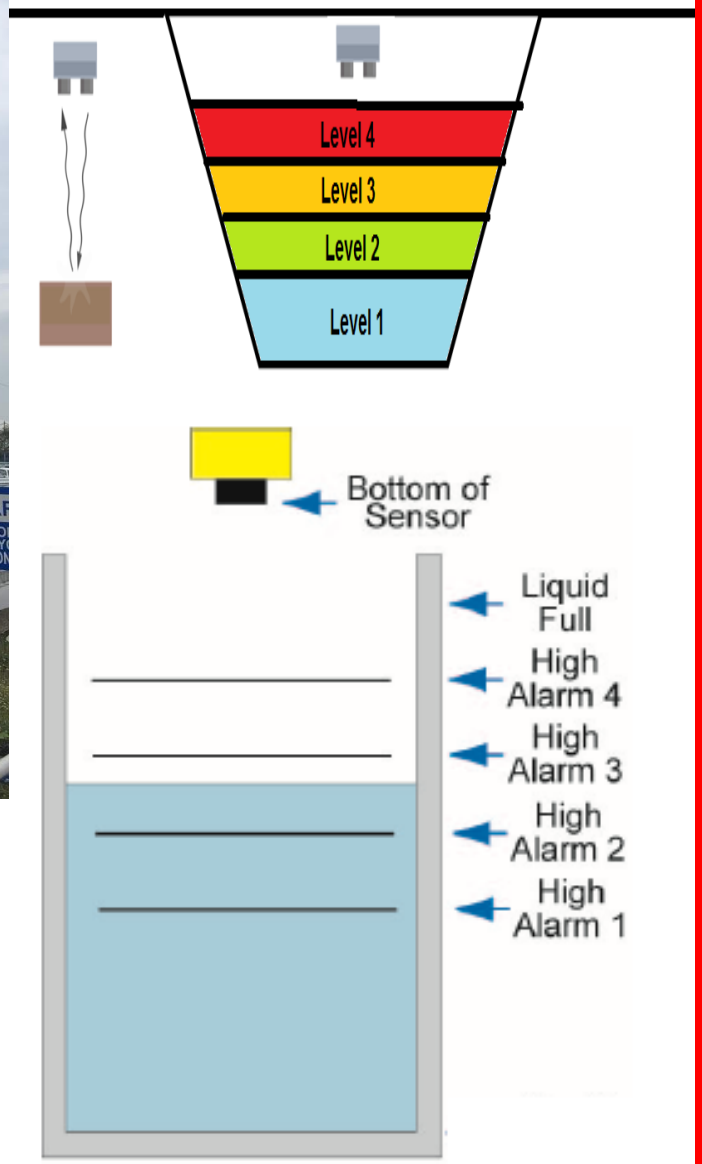
Traffic Management Solutions



Connectivity
Penang Free Wi-Fi

- **Collaboration** With **State Government** of Penang
- **1550 Hotspot** in Whole Penang, **623 Hotspot** in Seberang Perai
- **75Mbps** to **375Mbps** Bandwidth

Water Level Monitoring & **Alert Warning** System



Ultra Sonic will detect and send when water increase by it setting level

Level 1 – Basic Level
Level 2 – 25% Increase
Level 3 – 50% Increase
Level 4 – 75% Increase

Each level increase, system will send a notification via **SMS, Email** or **Apps**

COMPETITIVE
SEBERANG PERAI
ASPIRING CITY OF TOMORROW

Cashless Society

Payment

Cashless payment for Seberang Perai Services to be paid through online and mobile platform

Parking

- Smart parking through mobile apps and payment kiosk will reduce dependency on actual money being transferred and reducing paper.
- Encouraging the private parking to implement the same system will benefits all parties.

Smart Retail System

Encouraging small retail business especially under Seberang Perai management such as MPSP food Complex and market will help boost the utilization of Seberang Perai e-Wallet.

Unified Collaboration

Collaborating with another payment system to assist and utilization of Seberang Perai Cashless society to enhanced and reduce the burden of having multiple system of payment in Seberang Perai.

Security

Cashless environment will reduce the actual currency being utilize and for security purpose will reduce cases of mugging.

Delivery Services

Delivery services will be a major roles in the future of Seberang Perai as people mostly depends on fast delivery and utilizing a single platform for ordering and payment will boost the existing system and help small and medium business in Seberang Perai to expand the business in the local area.

Cyber Counter

Online Transaction

- MPSPpay
- Single payment gateway for Seberang Perai Government service

Online Submission

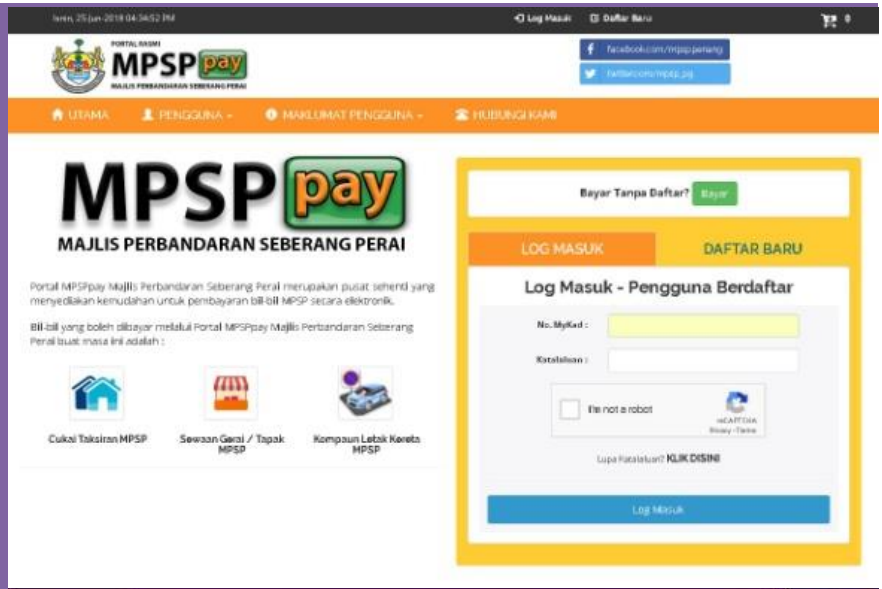
- OSC Online

Urban Transformation Center (UTC)

- Government single

Kiosk

- 13 Kiosk



Smart & **Sustainable**
Hawker Centers

Seberang Perai has more than 100 hawkers centers that has to be manages.

Seberang Perai is hoping to work with the existing tenant to come out with a plan to self manage the complex by utilizing a smart and better solution with green and sustainable technology plus monitoring to reduce and tackle existing issue.

With self manage and monitoring system, the tenant has more control and responsible to take care their complexs for the benefits of all.

- Self Sufficient Management System (PPP Collaboration)
- Maintenance Service
- Water Harvesting
- Solar Panel
- Digital Signage/ LED Light box
- CCTV Monitoring
- Smart Metering
- Grease trap monitoring sensor
- Water & Electricity usage monitoring
- LED Lightning
- Guard

COMPETITIVE SEBERANG PERAI ASPIRING CITY OF TOMORROW

Eco City
Batu Kawan

EcoCity
BATU KAWAN

"Apart from physically greening Batu Kawan, it is also important to look at introducing sustainable green and eco-friendly practices in the area.
"We hope Batu Kawan can become a model for other townships to eventually adopt an Eco-town concept that promotes a healthy living environment,"

- Chief Minister Lim Guan Eng

Neighbourhood Concept

Zero Renovation

Safe City

Affordable Homes

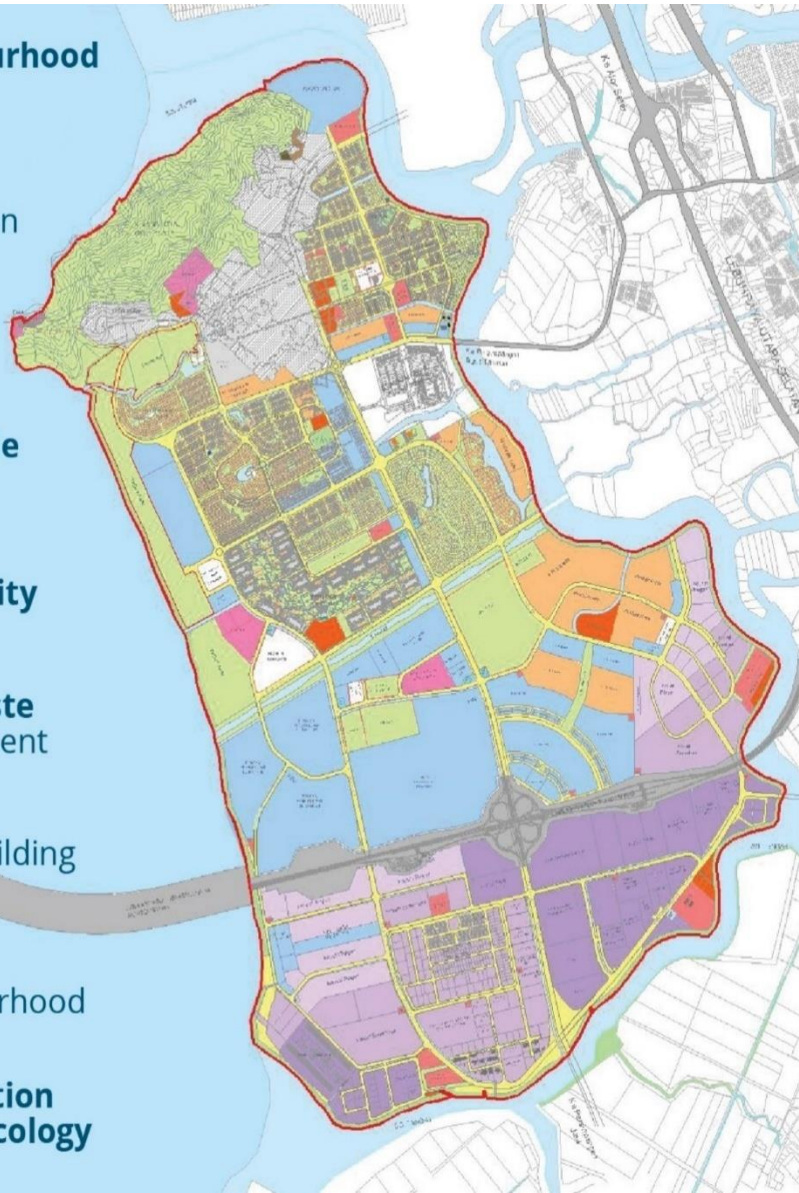
Accessbility

Solid Waste Management

Green Building

Green Neighbourhood

Preservation Existing **Ecology**



New Butterworth

NEW BUTTERWORTH

New Butterworth is a joint venture of **MPSP** and **Think City** in order **to improve** the quality of the built **environment** and the **public spaces**.

The Vision And The Principal Of New Butterworth

Butterworth as a unique destination, liveable and celebrate local values

Urban Renewal
Bukit Mertajam

Friendship City Programme - City of Yokohama, Yokohama City University, JICA (Japan International Cooperation Agency), Universiti Sains Malaysia & Municipal Council of Seberang Perai

横浜市 City of Yokohama

YOKOHAMA CITY UNIVERSITY

JICA

USM UNIVERSITI SAINS MALAYSIA

MUNICIPAL COUNCIL OF SEBERANG PERAI
PENANG, MALAYSIA

*"Project to Create **Townscape / Communities** for the City of Seberang Perai, Malaysia, that Accents Its **History** and **Nature**"*

"Promoting LED Through Ecotourism"

SPICEC 2018

Seberang Perai International Conference
on Ecotourism and Conservation Efforts

8 - 9 October 2018

The Light Hotel, Seberang Jaya, Penang

SEBERANG PERAI MUNICIPAL COUNCIL
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Thank You

#myseberangperai

MAJLIS PERBANDARAN SEBERANG PERAI

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