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## A REVIEW ON THE STATE STRUCTURE PLAN OF SELANGOR 2035: RADIAL ECONOMIC NUCLEUS DEVELOPMENT CONCEPT

Abdul Azeez Kadar Hamsa\* , Mansor Ibrahim, Azila Sarkawi, Irina Safitri Zen, Nurul Ain Nazihah Mohd Ikbal, Nur Shahida Abdullah, and Farah Husna Mohd Nor

Department of Urban and Regional Planning, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia

### ABSTRACT

This article is a review of Selangor State Structure Plan 2035 that is in line with the preparation of the state's 5 years' development plans. This review covers all items pertaining to the whole state development strategies, policies and indicatives areas. The review also commences if there is new or alterations on national plan policies or sectoral policies, which incorporated the alterations on policies at state level. It is in a way to incorporate the change of development trend intervened. The review of Selangor State Structure Plan 2035 consists of 46 policies, 160 strategies and 25 high impact proposals.

**Keyword:** *structure plan, development plan, planning system, Selangor, Radial Economic Nucleus Development*

\* Corresponding author: azeez@iium.edu.my

### INTRODUCTION

The State Structure Plan Review is a written statement that summarizes the general policies and proposals of land of a state which includes the social, economic, physical and environmental aspects of the areas under the Local Planning Authority as stipulated from Section 7 to Subsection 11B of Town and Country Planning 1976, (Act 172). The main purpose of this paper is to review the State Structure Plan of Selangor to formulate policies, strategies and proposals that are applicable for the state until 2035 due to changes in development.

Selangor is located on the west coast of Peninsular Malaysia bordered with Perak in the north, Pahang in the east, Negeri Sembilan in the south and Straits of Malacca in the west. Selangor also known as Darul Ehsan which means "Abode of Sincerity" is one of the 13 states in Malaysia. There are 9 districts in Selangor which are Gombak, Klang, Kuala Langat, Kuala Selangor, Petaling, Sabak Bernam, Sepang, Hulu Langat and Hulu Selangor. Map 1 shows the location of the State and Map 2 shows the districts in Selangor.



Map 1 & 2: Location Plan of Selangor

### METHODOLOGY

1

#### Stage 1: Mobilization



At this stage, the State Planning Committee (JPN) offers the directive to Selangor State Director (PLANMalaysia) to conduct a study on reviewing the Selangor State Structure Plan. Therefore, to conduct the study, the references for the Selangor State Structure Plan review are provided by the State Director Selangor (PLANMalaysia), followed by appointment of consultants.



#### Stage 2: Preparing Reports and Publications

2

Seven reports must be prepared for State Structure Plan. The reports are:

- Inception report
- Technical report
- Survey report
- Public participation report
- Draft State Structure Plan report
- Executive Information System Application (EIS) report and
- Selangor State Structure Plan 2035 report

In line with the preparation of the reviewing of the Selangor State Structure Plan 2035, two publicity reports were made to public:

- Publicity Report of Review of Selangor State Structure Plan 2035 survey. From this publicity, publicity report and public participation report are provided.
- Publicity Draft Review State Structure Plan 2035 followed by preparation of Publicity and Public Disclaimer Report.

3

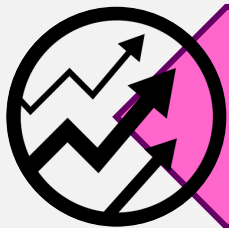
#### Stage 3: Structure Plan Approval



The third stage involves the approval of the Selangor State Structure Plan 2035. The processes implemented at this stage are:

- State Planning Committee (JPN) approval
- Consultation with National Physical Planning Council (MPFN)
- Final approval of the State Planning Committee (JPN)
- Consent and Reporting (MMKN)

## OBJECTIVES



1. To enhance technological advancement, skilled employments in order to attract foreign and local investments to make Selangor as the main economic contributor.



2. To increase the provision of green and hi-tech facilities, infrastructure, and utilities to meet the population needs and secure the well-being of the community.



3. To solve housing and socio-economic issues of the population by creating a safe and inclusive community for enhancing the living standard of the population.



4. To establish an excellent transportation system, reliable connectivity, and seamless traffic flow in fulfilling the growing needs of the users.



5. To control and prevent the encroachment of development at ESA areas to minimize environmental degradation.



6. To establish environmental quality improvement plans for polluted area through pollution prevention program.

## DEVELOPMENT THRUSTS

In line with the objectives, 5 development thrusts were identified namely:



### PHYSICAL

Equipping advanced and reliable infrastructure

4

Policies

16

Strategies



### TRANSPORTATION

Realizing an accessible, reliable and sustainable transportation system

7

Policies

29

Strategies



### ECONOMY

Enacting dynamic, smart and prosperous economic growth .

7

Policies

29

Strategies



### SOCIAL

Spurring equitable and inclusive community

12

Policies

44

Strategies



### ENVIRONMENT

Sustaining the living environment

5

Policies

15

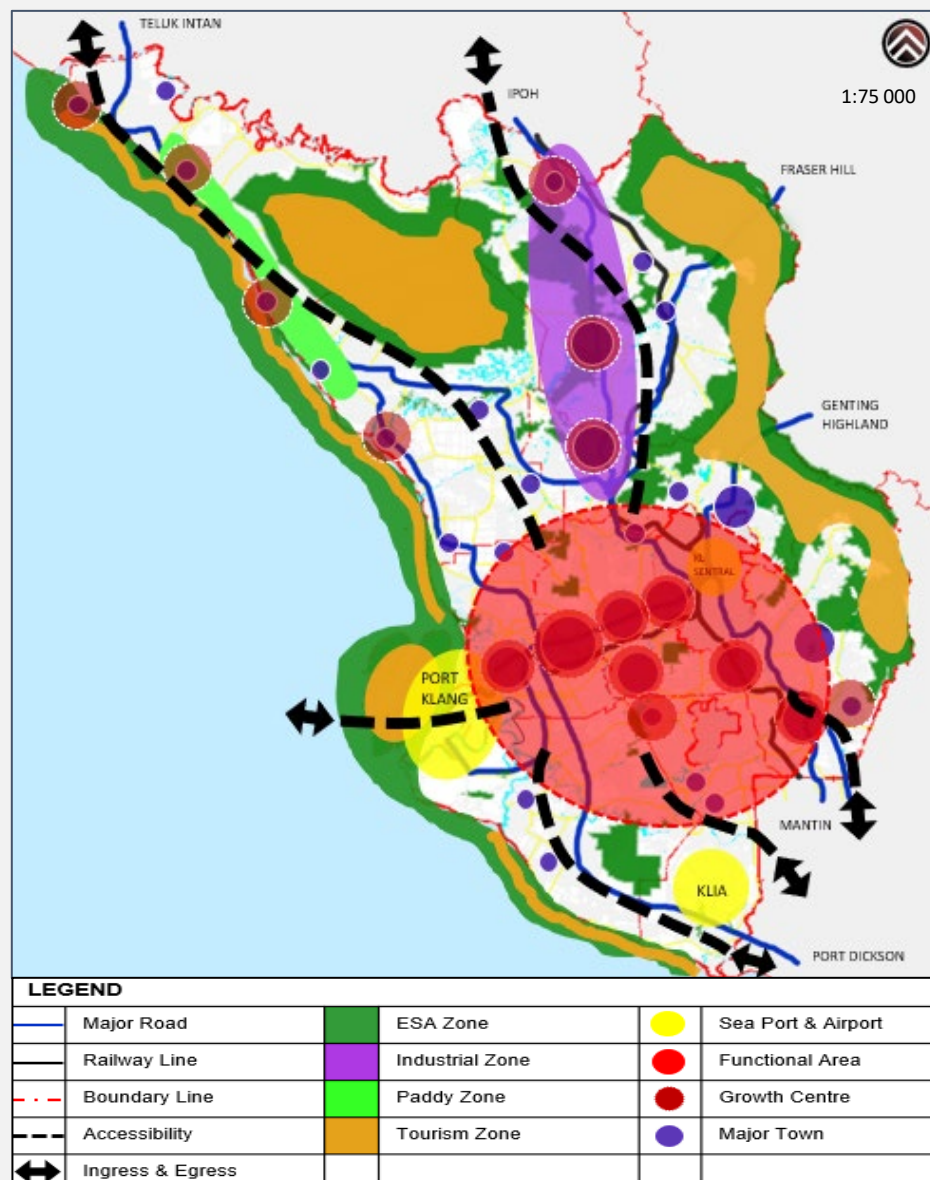
Strategies

## DEVELOPMENT CONCEPT

The development concept describes the direction of the development of State Structure Plan of Selangor 2035 by presenting the strategic direction for the Selangor State development. These strategies are translated into land use and physical planning through the establishment of development concepts.

## ‘Radial Economic Nucleus Development’

Radiated development comes from the concept of Le Corbusier and Ebenezer Howard’s Garden City plan. In Selangor, Greater Kuala Lumpur (GKL) Conurbation plays a huge role for other districts to develop. The concentration for GKL involves three main aspects such as physical, economy, and social. Map 3 illustrates the development concept of Selangor.

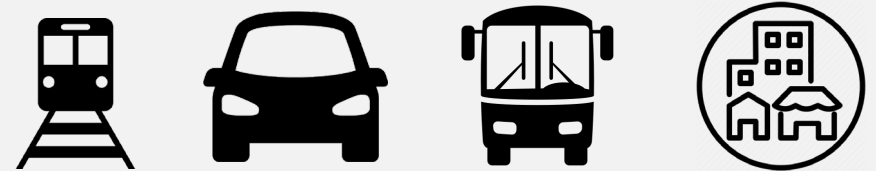
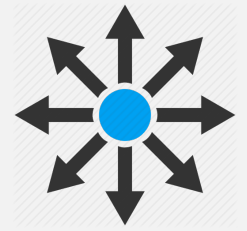


Map 3: Development Concept of Selangor State Structure Plan 2035

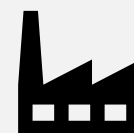


GKL acts as a pivotal hub (functional area) that involves various types of development based on three main aspects including administration, business, services, living, and working. This hub is also supported by the combination of international airport (KLIA), seaport (Port Klang), and transit center (KL Sentral).

Growth centers and major towns of Selangor in GKL are highly populated with massive built up area supported by efficient road and railway linkages. However, other towns outside GKL also have its specializations and it radiates from the functional area. Each districts has its own resources for economic growth and by 2035, it is assumed to be sustainable based on current development.



These major towns are polycentric which are related with urban hierarchy from big towns to small towns. The radial development expanded from the core conurbation are mostly in hinterland areas such as Sabak Bernam, Kuala Selangor, Kuala Langat and Hulu Selangor. It radiates through rail and road network. Even though these hinterland areas are further away from the hub, they have specific corridor which contributes to their economic growth; industrial zone, paddy zone, ESA zone, and tourism zone.



#### INDUSTRIAL ZONE

This zone will be developed for industry sector based on existing and proposed projects. From Rawang to Bernam Jaya, the zone is connected via road and rail transportation network and focuses on automotive industry.



#### PADDY ZONE

Type of soil and topography make Kuala Selangor and Sabak Bernam potential for agriculture sector especially paddy plantation. These rural areas are specifically developed by the local communities especially by farmers and fisherman at the coastal areas.



#### ESA ZONE

This zone involves greenery areas such as forest reserve, hilly areas, mangrove forest, wetlands and others which should be conserved and preserved.



#### TOURISM ZONE

Major products of ecotourism make improvement of most of ESA areas by nature-based activities. It is also located along coastal line which gives minimal impact for environment and attracts more visitors and foreign tourists.

## PROJECT 1: ASEAN HEALTH HUB

ASEAN Health Hub is a project that enhances and integrates the existing health tourism in Selangor. Figure 1 shows this proposed hub.



Medical Health Tourism Council stated Malaysia healthcare tourism's compound annual growth rate has increased 17% from 2015 to 2018.

It is in conjunction with the fact that Selangor is rich with **more than 60 nature tourism products** as stated in National Eco-Tourism Plan 2025. Meanwhile, Selangor is strategically located in ASEAN Health Hub because of **Malaysia main gateway is in Selangor.**

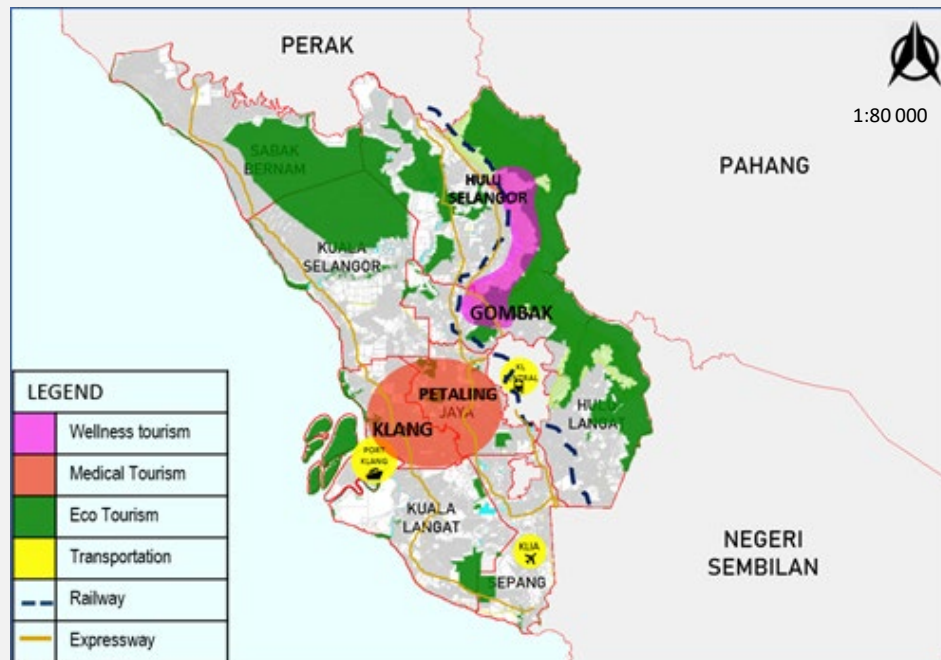
### Related Policies:

- EC 1:** Strengthen Industrial Sector to Increase the Revenue of Selangor in Manufacturing Sector
- EC 10:** Strengthen Health Tourism Products as a Hub Health Tourism Destination in ASEAN to Increase Tourist Arrivals and Economic Growth
- EC 12:** Strengthen Business Tourism Products as International Destination for Foreign Investment
- SC 10:** Provide Adequate, Efficient, Safe, Usable and Accessible Public Facilities to Improve the Livelihood of the Community.



Figure 1: Proposed ASEAN Health Hub  
(Source: Britneff, 2019)

Map 4 depicts the proposed location for ASEAN Health Hub in Selangor.



Map 4: The proposed location for ASEAN Health Hub

### PROJECT IMPACT



**RM8 billion**  
SELANGOR'S GDP



**RM2 million**  
TOURISTS ARRIVAL



**INCREASE**  
JOB EMPLOYMENT

## PROJECT 2: HULU SELANGOR AUTOMOTIVE BELT



MITI highlighted Hulu Selangor as a **new automotive outgrowth**



**Important hub** for the development of national automotive assembly plant in Selangor.



MIDA highlighted Hulu Selangor as a **National Automotive Hub**, alongside Proton City, Tanjung Malim



**GOAL:** Selangor, the leading, sustainable **Smart City in ASEAN.**

### Related Policies:

- EC 1:** Strengthen Industrial Sector to Increase the Revenue of Selangor in Manufacturing Sector
- SC 2:** Competitive and Viable Human Capital Development towards Sustaining the State

## CASE STUDY: VOLKSWAGEN TRANSPARENT FACTORY AND AUSTRALIA'S AUTOMOTIVE HUB



Figure 2: Volkswagen Transparent Factory  
(Source: Carsten K., 2020)

The Volkswagen plant in Dresden has developed in the Centre of Future Mobility, an innovative showcase of e-mobility and digitalization of the Volkswagen brand. Figure 2 shows the factory. With its "Think Blue. Factory." program, the Volkswagen brand has set itself clear targets for the environmentally sustainable positioning of all its plants. .

The Volkswagen brand already met the environmental targets it had set for 2018 in 2016, which is to reduce the environmental impact of all Volkswagen plants by 25%.

### PROJECT COMPONENT

- Modern Architectural Design Factory Building, which can be a tourism product
- Research and Development Centre specifically for Next-Generation Vehicle (NxGV) and Energy-Efficient Vehicles (EEVs)
- Comprehensive Automotive Ecosystem

### PROJECT IMPACT



**RM30 billion**  
SELANGOR'S GDP



**RM10.05 billion**  
FOREIGN AND LOCAL INVESTMENTS



**710,000**  
JOB EMPLOYMENT

### PROJECT 3: AGRO-LOGISTICS AND MARKET INTEGRATION HUB (ALMIH)

The proposed on Agro-Logistics and Market Integration Hub is to cater for the problems on decreasing agricultural production and plantation areas throughout the years. It is also to maintain and increase the current productions for future supply.



It is located in the district of Kuala Selangor which acts as a centre to collect all the agricultural products. It is located adjacent to Klang which will ease the delivery of the goods for export. It acts as a central collection and distribution point for the local and national market of agricultural products in Selangor.

#### Related Policies:

**EC 7:** Strengthen the Local Product and Sufficient Business Space Offered in Rural and Sub-urban Areas

**SC 2:** Competitive and Viable Human Capital Development towards Sustaining the State

**EV 1:** Control and Monitor All Form of Environmental Quality Index Allowed by the Environmental Standards



Figure 3: Warehouse and logistic services (Source: Corporate News, 2019)



Figure 4: Food Processing and packaging centre (Source: dreamstime.com, 2020)

#### PROJECT COMPONENTS

- It comprises of warehouse, food processing and packaging centre, and logistic service. Figure 3 & 4 show these centres.
- The warehouse will allow stock to be transported in bulk quantities that will reduce the transportation cost. There will be various warehousing services.
- It is to achieve the economics of large-scale production.
- Meanwhile the logistic services is to create a supply chain from the point of production to the customer or to export.

#### PROJECT IMPACT



**RM14.9 billion**  
SELANGOR'S GDP



**RM5.3 billion**  
VALUE ADDED



**4,000**  
JOB EMPLOYMENT

### PROJECT 4: 72 HOURS SELANGOR

Selangor known as a **second highest number of tourist agency in Malaysia** with a total number 942 agencies and 1930 tourist guides.



Unfortunately, there was a **decline in the number of occupancy rate 3.1% in 2018**, due to high number of single day trip stay. Therefore, this proposal aims to sustain jobs of local employees and boost the economic growth of Selangor.

#### Related Policies:

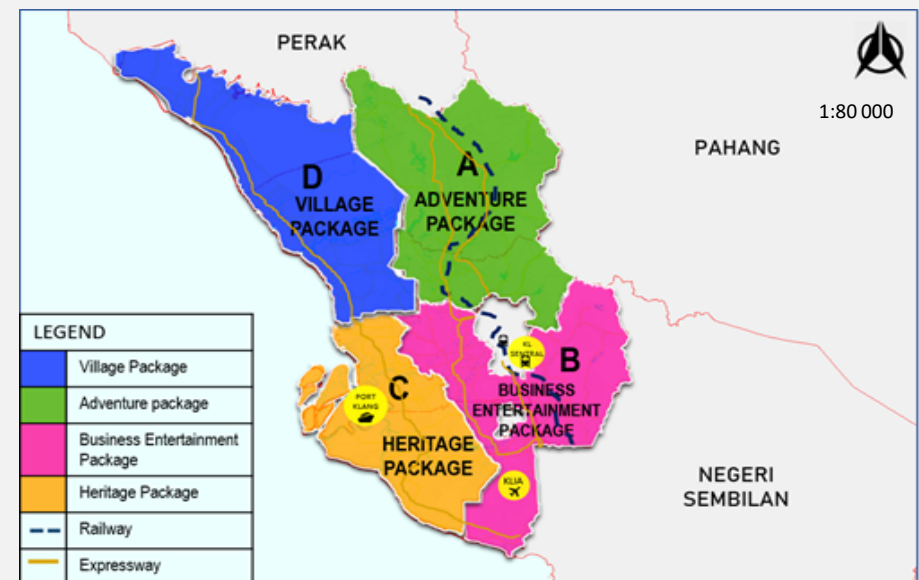
**EC 7:** Strengthen the Local Product and Sufficient Business Space Offered in Rural And Sub-urban Areas

**EC 9:** Improve and Manage the Historical Buildings and Cultural Heritage to Promote the Existing Heritage Values

**EC 11:** Establish the Integration of Coastal Tourism, Agro-tourism and Homestay Areas as Potential Tourism Destination Enhancing the Well-being of the Local Community

#### PROJECT LOCATION

The location of this project is selected based on National Physical Plan 3 development promotion zones such as Kuala Kubu Baru, Sabak Bernam, and Kuala Selangor. While other locations are concentrated in national conurbation area such as Gombak, Hulu Langat, Sepang Petaling Kuala Langat and Klang. 4 zones of 72-Hours Selangor Package are shown in Map 5.



Map 5: 72 –Hours Selangor Package is divided into 4 zone with a different categories and activities.

#### PROJECT IMPACT



**INCREASE**  
SELANGOR'S GDP



**INCREASE**  
TOURISTS ARRIVAL



**SUSTAIN**  
JOB EMPLOYMENT

## PROJECT 5: APPLICATION OF WASTE TO ENERGY IN ALL DISTRICTS

# By 2030,

most of the sanitary field in Selangor **will reach its lifespan**. The capacity is limited to cater for the demand of solid waste in the future.

### Related Policies:

**PH 1:** Provide Adequate Infrastructure System in Every District to Cater for the Future Demand

**EV 1:** Control and Monitor All Forms of Environmental Quality Index Allowed by the Environmental Standards

Figure 5 shows the proposed waste process centre that will be implemented in Selangor.



Figure 5: Proposed Waste Process Centre (Source: Bioenergy International, 2019)

## PROJECT 6: APPLICATION OF SOLAR FARM IN SABAK BERNAM AND HULU SELANGOR

Based on the projection, **by 2035**, there will be a high demand on electrical supply. Solar farm is the best way to reduce carbon emissions as solar farm distribute clean energy. It is a renewable energy that can be harness in all areas around the world as long as there are sunlight. It has low maintenance cost.

### Related Policies:

**PH 1:** Provide Adequate Infrastructure System in Every District to Cater for the Future Demand

**PH 4:** Application of Renewable and Green Technology in Water, Electricity, Sewerage and Solid Waste System towards Sustainable Approach

The proposed solar farm is depicted in Figure 6.



Figure 6: Proposed Solar Farm (Source: Giles, 2017)

## PROJECT 7: SUSTAINABLE URBAN DRAINAGE SYSTEMS (SuDS)

This project is planned **to cater for flood issues**. Flood occurs due to **weak drainage system** reported in most of the cases located in the high saturated areas compared to other factors that lead to flood events. It is also **to cater for insufficient water supply caused by non-revenue water loss**.

### Related Policies:

**PH 3:** Ensure Proper Drainage and Irrigation System To Reduce Flood Problems In Urban Areas

**PH 4:** Application of Renewable And Green Technology In Water, Electricity, Sewerage And Solid Waste System as part of Sustainable Approach

## CASE STUDY: COPENHAGEN, DENMARK

SuDS is not just about drainage, it is primarily about managing water quantity, water quality as well as providing biodiversity and amenity.

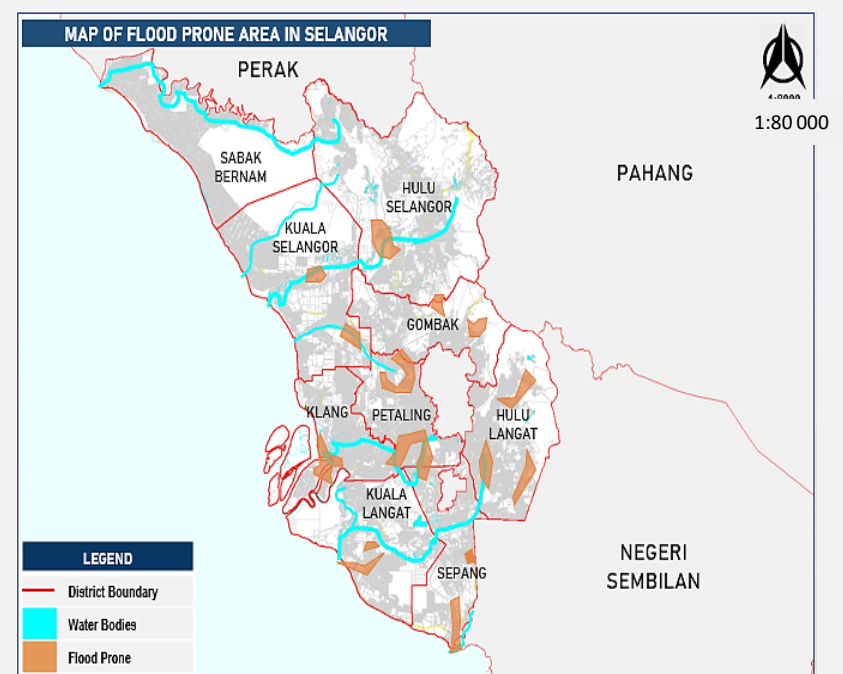
The application of SuDS is through a man-made structure, where during normal days it can be used for recreation and during heavy rain, it becomes a detention pond.

Figure 7 and 8 illustrates the application of SUDs at a recreational area in Copenhagen, Denmark.



Figure 7 and 8: Application of SUDs in Copenhagen, Denmark (Source: Cathcart-Keys, 2016)

The project will be implemented in all districts in Selangor but mainly focuses on the flood prone areas which is illustrated in Map 6.



Map 6: Flood Prone Area in Selangor

## PROJECT 8: INTEGRATED UNDERGROUND FACILITIES (IUF)

The proposal of Integrated Underground Facilities is introduced because of the problem of inadequate supply of public facilities. This project will be implemented in all districts with high demand for public facilities and lack of land areas namely district of Petaling, Gombak, Klang, and Hulu Langat.

### Related Policies:

**PH 1:** Provide Adequate Infrastructure System in Every District to Cater for the Future Demand

**SC 9:** Provide Integrated Public Facilities in An area to Minimize the Land Usage

**SC 10:** Provide Adequate, Efficient, Safe, Usable and Accessible Public Facilities to Improve the Livelihood of the Community

### CASE STUDY: HELSINKI UNDERGROUND FACILITIES, FINLAND

Helsinki's underground public facilities construction started in the 1980s and continues until this day. This underground spaces is connected by several types of transit, pedestrian, and private vehicles. Figure 9, 10, 11 and 12 show the underground facilities in Helsinki, Finland.



Figure 9: Itakeskus Swimming Hall (Source: Helsinki Tourist Information, 2019)

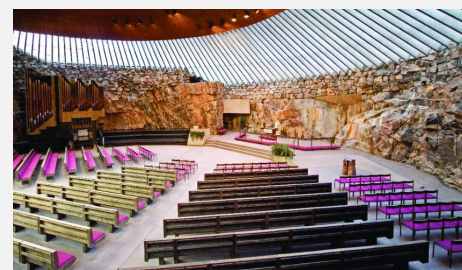


Figure 10: Tempeliaukio "Rock" Church (Source: Vahaaho, 2016)



Figure 11: Formula Center Helsinki (Source: Helsinki Tourist Information, 2019)



Figure 12: Leikkiluola indoor playground (Source: Helsinki Tourist Information, 2019)

### PROJECT COMPONENT



Accessible by transit (LRT, MRT, KTM), bus, private vehicles, and also walking.



Consists of several high demand public facilities.



Supported by universal design to ease the movements of people with disabilities (PWD)



Supported by other supporting facilities such as toilets, and cafeteria.

## PROJECT 9: CONGREGATE MOBILE FACILITIES HUB

Mobile facilities are facilities which move from one location to another, serving large number of communities. This congregate mobile facilities hub was proposed to serve the rural community that has difficulties in accessing public facilities. The facilities hub will be located in Hulu Selangor, Kuala Selangor and Kuala Langat.

### Related Policies:

**SC 1:** Reduce The Income Disparity Between Population In Urban And Rural Area And Towards Realizing Zero Poverty

**SC 4:** Realise A Safe, Prosperous And Harmonious Social Life State

**SC 5:** Establish Inclusive Social Well-being To Ensure Better Life For The Aging Population

**SC 10:** Provide Adequate, Efficient, Safe, Usable And Accessible Public Facilities to Improve the Livelihood of The Community

**SC 12:** Improve The Management And Direction Of Educational, Health, Safety And Welfare Facilities To Ensure A Safe And Healthy Society

### PROJECT COMPONENT

#### Mobile Facilities

Mobile Facilities will be in the form of a van that brings the basic services of public facilities to the community. Figure 13 and 14 portray the examples of mobile facilities that can be implemented in rural areas in Selangor.



Figure 13: Mobile Dialysis Unit (Source: Odulair Mobile, 2015)



Figure 14: Mobile Clinic (Source: Mathews Specialty Vehicles, 2018)

#### Mobile Facilities Hub

Figure 15 outlines the proposed mobile facilities hub which act as a one stop centre for all the mobile facilities. It also functions as a service centre and workshop for the mobile facilities van if any maintenances are needed.

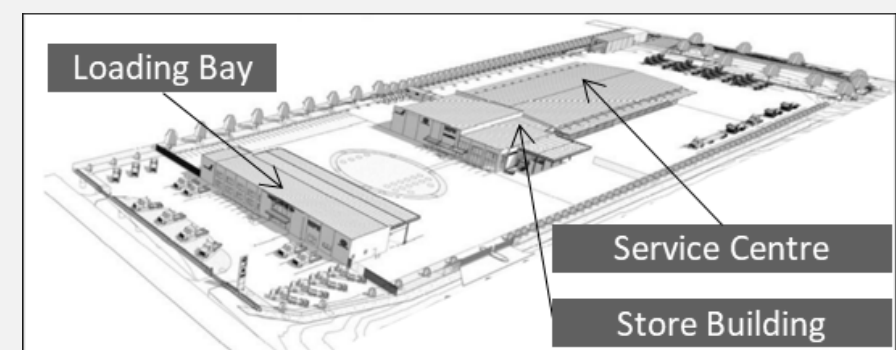


Figure 15: Proposed Mobile Facilities Hub (Source: Winkless, 2019)

## CONCLUSIONS

In conclusion, based on the review, there are some amendments to the existing Selangor Structure Plan 2035. It is important to review the State Structure Plan to ensure the policies at state-level incorporate with the changes of development trend and aware of new alteration on national plan policies or sectoral policies. This is in addition to the process in which the State Structure Plan review is constructed. Therefore, the Selangor development strategy basically integrates with the vital components enacting dynamic, smart and prosperous economic growth. Realizing an accessible reliable and sustainable transport system, spurring equitable and inclusive community, sustaining the living environment and equipping advanced and reliable infrastructure. Hence, a comprehensive planning strategy could be attained in order to comply with Selangor's vision of becoming a self-sustained economic, social and environmental state in the future while fulfilling the goal of the Selangor Structure Plan 2035 which is empowering Selangor as a self-sustained State by 2035.

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