KUALA LUMPUR PEDESTRIAN AND CYCLING MASTERPLAN 2019-2028

DEWAN BANDARAYA
KUALA LUMPUR

KUALA LUMPUR PEDESTRIAN AND CYCLING MASTERPLAN 2019-2028

DEWAN BANDARAYA KUALA LUMPUR

DECEMBER 2019

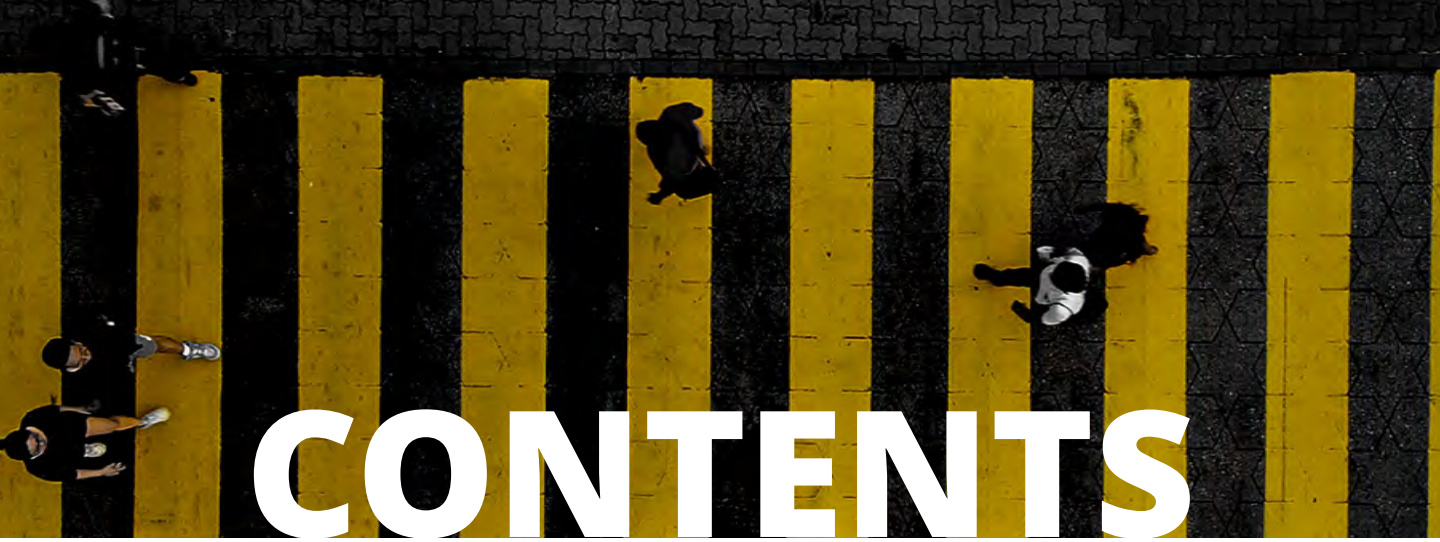
DEWAN BANDARAYA KUALA LUMPUR

Acknowledgment

Dewan Bandaraya Kuala Lumpur (DBKL) would like to thank Uni-Technologies Sdn Bhd, Universiti Teknologi Malaysia for their professional services as the principal consultant in the preparation of the Kuala Lumpur Pedestrian and Cycling Masterplan 2019-2028.

We also would like to express our deep sense of gratitude to all stakeholders, NGOs, companies, individuals and communities as listed below for providing invaluable guidance, comments, suggestions and cooperation throughout the course of preparing this masterplan.

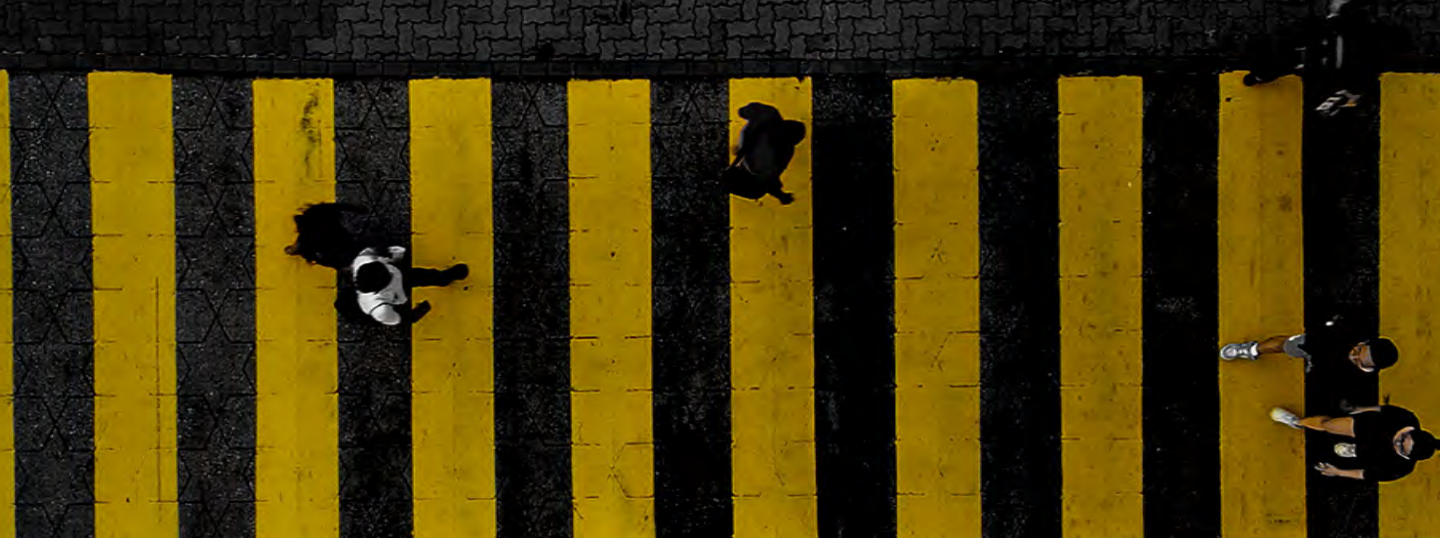
KWP, MOE, MOH, KPKT, KBS, APAD (SPAD), PDRM, PLANMalaysia, PKB, JKR, JPS, JKJR, PRASARANA, Cycling KL, The Basikal, Bike With Elena, Bike Kitchen, Think City, Urbanice Malaysia, MIMOS, MIROS, IEN Consult, Neuron, Mikebikes, TTDI Residents' Association, all Kawasan Rukun Tetangga (KRT) in Kuala Lumpur (and Omar Elsharawy for the cover photo)



CONTENTS

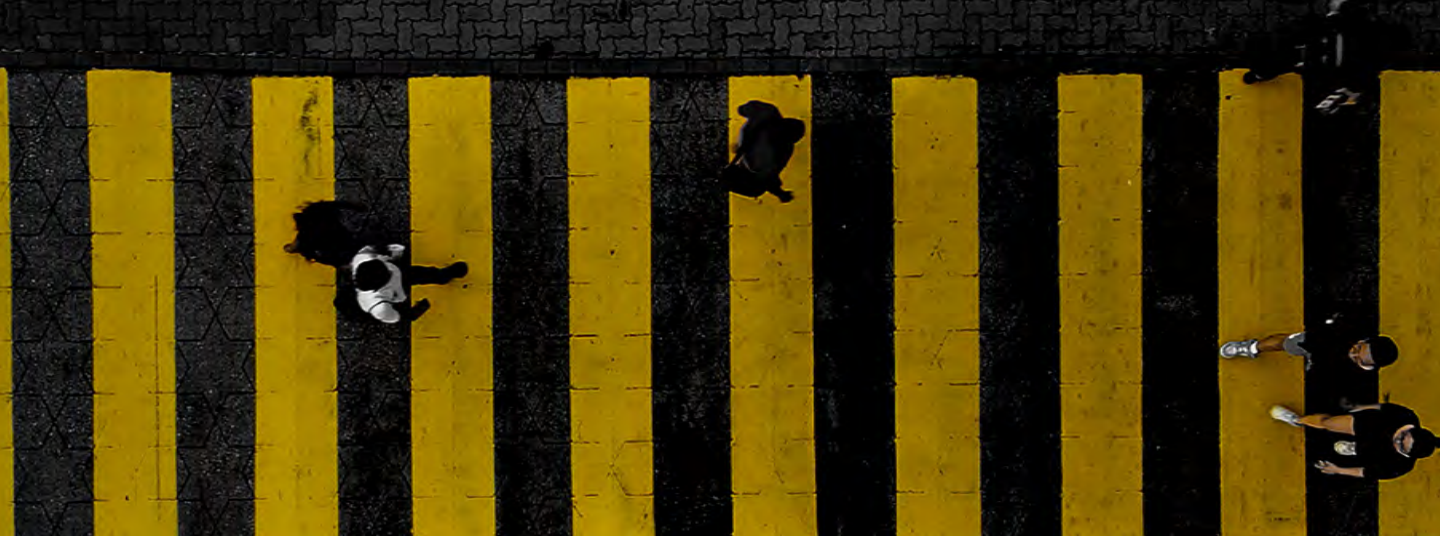
Chapter 01
INTRODUCTION

Chapter 02
SUMMARY OF FINDINGS



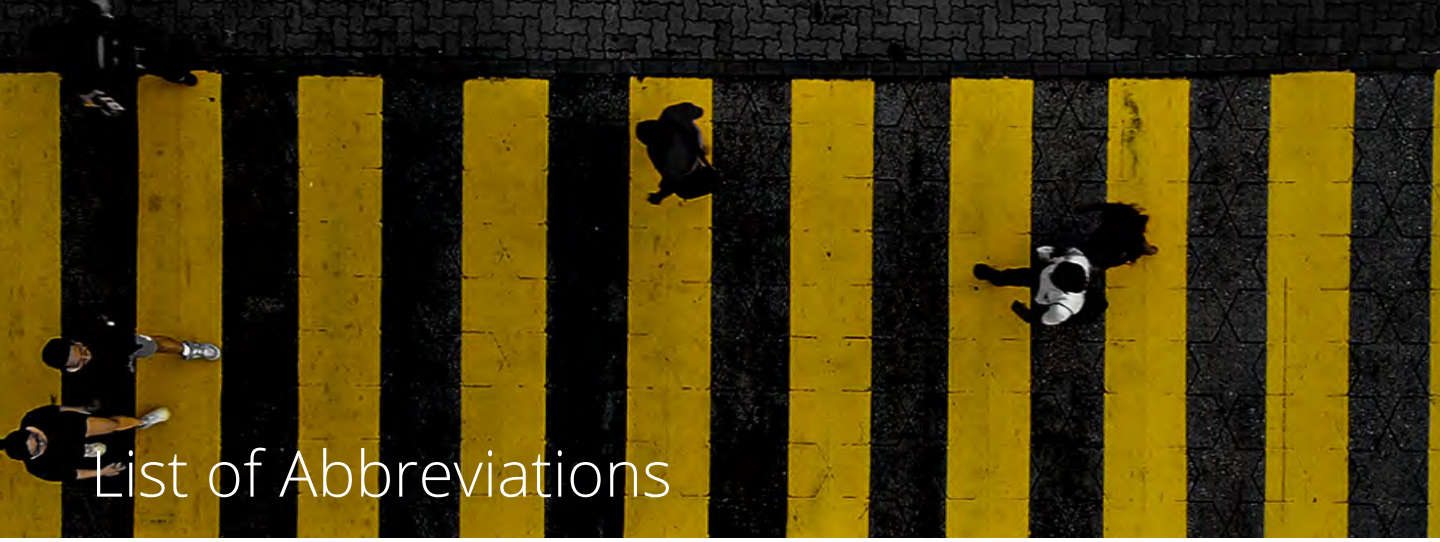
Chapter 03
TARGET GROUPS AND PROJECTIONS

Chapter 04
STRATEGY AND ACTION



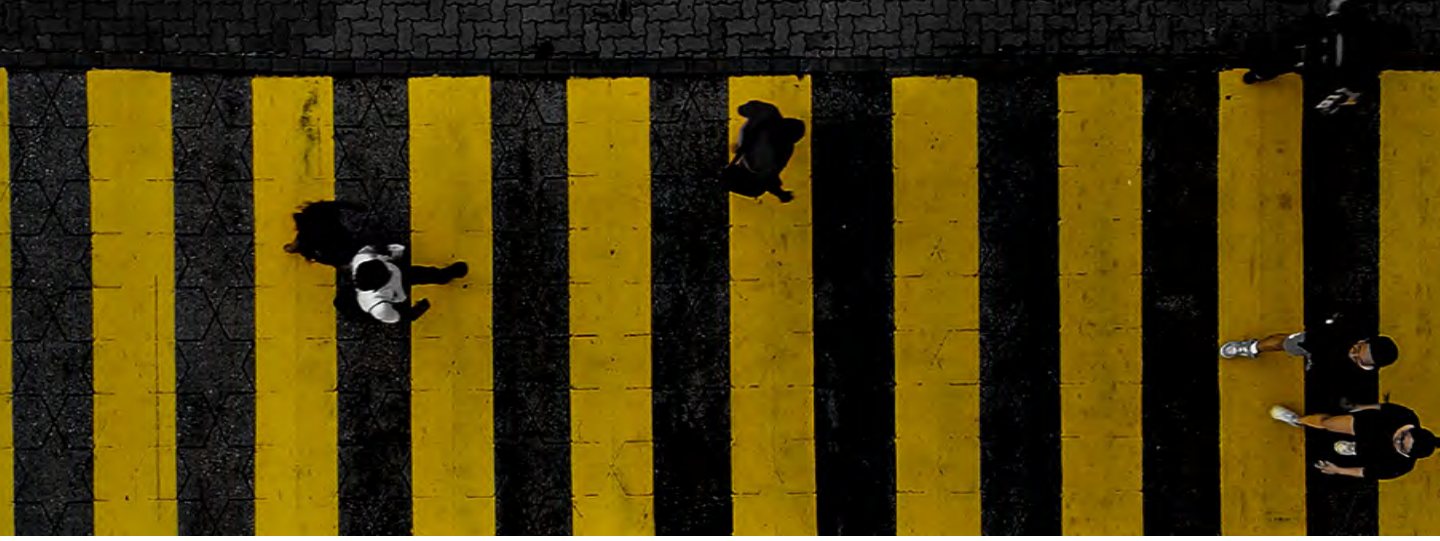
Chapter 05
PHYSICAL DEVELOPMENT

Chapter 06
IMPLEMENTATION PLAN



List of Abbreviations

APAD	Agensi Pengangkutan Awam Darat
ARP	Area Road Pricing
Bdr.	Bandar
Bike-Ped	Bike-Pedestrian
BTP	Bus Integration Plan
CBD	Central Business District
CCTV	Closed-Circuit Television
CETDEM	Center for Environment, Technologies & Development Malaysia
CHKL	City Hall Kuala Lumpur
Cont.	Continue
CPTED	Crime Prevention Through Environmental Design
CSN	Community Surveillance Network
CSN	Community Surveillance Network
DBKL	Dewan Bandaraya Kuala Lumpur
Dev.	Development
e.g	Example
EPEX	Elevated Pedestrian Expressway
EPPs	Entry Point Projects
EPU	Economic Planning Unit
ESPN	Entertainment and sports Programming Network
etc.	Et Cetera
ETP	Economic Transformation Programme
FGDs	Focus Group Discussions
ft	feet
GEF	Global Economic Facility
GLC	Government-Linked Company
GNI	Gross National Income
Gov.	Government
GTP	Government Transformation Program
HQ	Headquartes
HSR	High-speed Rail System
i.e	In other Words
IIIP	Interchange & Integration Plan
IoT	Internet of Things
ISF	Improvement Service Fund
IT	Information Technology
ITE	Institute of Transportation Engineers
JKJR	Jabatan Keselamatan Jalan Raya
JKR	Jabatan Kerja Raya
Jln.	Jalan
JPA	Jabatan Perkhidmatan Awam
JPIF	Jabatan / Infrastructure Planning Department
JPS	Jabatan Pengairan dan Saliran
KBS	Kementerian Belia dan Sukan
Kg.	Kampung
KL	Kuala Lumpur
KLCC	Kuala Lumpur City Centre
KLGH	Kuala Lumpur General Hospital
km	Kilometres
Km/h	Kilometre per Hour
KOL	Key Opinion Leader
KPJ	Kumpulan Perubatan Johor
KPKT	Kementerian Perumahan dan Kerajaan Tempatan
KRT	Kelab Rukun Tetangga
KWP	Kementerian Wilayah Persekutuan
LHDN	Lembaga Hasil Dalam Negeri
LPTMP	Land Public Transport Master Plan
LRT	Light Rapid Transit
LUP	Land Use Plan
m	Metre
MDEC	Malaysia Digital Economy Corporation
MIMOS	Malaysia Institute of Microelectronic Systems
MIROS	Malaysia Institute of Road Safety Research



MNCs	Multinational Corporation
MOE	Ministry of Education
MOH	Ministry of Health
MOHR	Ministry of Human Resorces
MOT	Ministry of Transport
MPPJ	Majlis Perbandaran Petaling Jaya
MRT	Mass Rapid Transit
NACTO	National Association of City Transportation Official
NGOs	Non-Governmental Organisation
NKEA	National Key Economic Area
NKRAs	National Key Result Areas
NLPTMP	National Land Public Transport Master Plan
OUM	Open University Malaysia
PDRM	Polis DiRaja Malaysia
PJ	Petaling Jaya
PKB	Perbadanan Pembangunan Kampong Bharu
PLAN Malaysia	Jabatan Perancangan Bandar dan Desa
PMD	Personal Mobility Devices
POD	Pedestrian-oriented Development
PRASARANA	Prasarana Malaysia Berhad
PWDs	Person with disabilities
PWTC	Putra World Trade Centre
RoL	River of Life
ROW	Right-of-Way
SBK	Sungai Buloh – Kajang Line
SCM	Supply Chain Management
Sek.	Sekolah
sf	Square Feet
Sg.	Sungai
SGP	Small Grants Programme
SMA	Sekolah Menegah Agama
SPAD	Suruhanjaya Pengangkutan Awam Darat
SSP	Sungai Buloh – Serdang – Putrajaya Line
TBS	Terminal Bersepadu Selatan
TDM	Travel Demand Management Plan
TfL	Transport for London
TOD	Transit-Oriented Development
TRX	Tun Razak Exchange
TTDI	Taman Tun Dr Ismail
TTP	Taxi Transformation Plan
U.K	United Kingdom
U.S	United Stated
UCSI	UCSI University Taman Connaught
UD	Urban Design
UM	University Malaya
UNDP	United Nations Development Programme
Uni.	University
Unit LA 21	Unit Local Agenda 21
URDP	Urban Rail Development Plan
USA	United States of America
WDP	Walking Demand Potential

Chapter 1 outlines the study framework comprising the study goal, objectives, and methodology. This is followed by a brief planning context at the national level, where relevant policies and plans that influence the direction of Kuala Lumpur's future development are illustrated. The proposals in this Master Plan will be harmonised with the future development scenario in Kuala Lumpur.

1

Chapter 01
INTRODUCTION

Before we learn to drive, we first learn to walk and cycle. Walking and cycling can be enjoyed and performed by people of all ages and physical capabilities. And yet, cities, over the years, have shifted their focus and priority on motorised transportation. However, in recent decades, modern megapolitans like New York, Copenhagen, Tokyo and many others have shifted their focus to pedestrians and cyclists. These cities realise that a more sustainable future can only be achieved when the attention is shifted towards more active urban mobility modes like walking and cycling and combined them (i.e. walking and cycling) with the use of public transportation. The problems created by a car-dependent, highly motorised societies are not difficult to understand. With harmful fumes and noise, private cars not only affect the environment, but they are also detrimental to the quality of life of the citizens.

Congestions created by these cars increase travel time and costs, thus, forcing the government to invest more money on infrastructure development – a clear opportunity cost that only benefits a specific segment of the population – people with cars. For those that are unfortunate to not own a vehicle, they are left out from these investments. In Malaysia, the trend towards active urban mobility – walking and cycling – is well laid out in various policy documents. The Safe City Programme – one of the seven National Key Result Areas (NKRAs) under the Government Transformation Program (GTP) identified that crime in cities can be reduced through improvement of pedestrian network. On the same note, the Greater Kuala Lumpur/Klang Valley National Key Economic Area (NKEA) – one of the twelve.

NKEAs under the Economic Transformation Programme (ETP) – have identified **Creating a Comprehensive Pedestrian Network** as one of the Entry Point Projects (EPP) to be championed by Dewan Bandaraya Kuala Lumpur (DBKL). Based on these mandates, DBKL conceived a plan to produce a masterplan for pedestrians and bicycles. The masterplan will then serve as a comprehensive design and implementation plan for developing networks of efficient and user friendly walking and bicycle paths in Kuala Lumpur.

Photo Credit: 9M Studio

Aspiration of the Masterplan

"Through the Pedestrian & Cycling Masterplan, Kuala Lumpur will be able to make its transportation system more environmentally, economically, and socially sustainable"

Furthermore, Kuala Lumpur will be able to sustain the liveable city agenda where the quality of life and the environment is enhanced through improvements in smart mobility paving the way for a healthy lifestyle, with priority focusing on the following components:

01
Increasing pedestrian and cycling safety

02
Providing mobility and accessibility for all

03
Reducing pollution, addressing global warming and becoming a sustainable city

04
Promoting walking and cycling as a healthy lifestyle

05
Ability to increase social interactions on streets

06
Fostering economic growth

07
Alternatives to driving especially for shorter distances

Goal And Objectives

"Sustaining the liveable city agenda where quality of life and environment is enhanced through improvements in smart mobility towards a healthy lifestyle."

Objective 1:
To create 'buy' in from the different segments of KL's population by increasing the quantity and enhancing the quality of walking and cycling facilities

Objective 2:
To champion and incentivize walking and cycling as supporting components of seamless urban mobility to **change the mindset of 'having to walk to wanting to walk'**

Objective 3:
To transform the urban lifestyle by connecting vibrant and attractive public spaces created by placemaking with safe and comfortable walking and cycling facilities

Study Framework

For the first stage, the study will identify the influencing factors of walking and cycling through literature review. The factors will be used to construct the baseline data indicators. The data will be divided into two categories for collection, which are physical and non physical data. Data will be collected through a desk study, user survey, in-depth interviews and site surveys. The outcome of the data analysis will be brought to the FGD/workshop for clarification and updates as well as to get "buy-in" from the general public and stakeholders. Once the data and outcome are verified, it will be used to formulate the relevant recommendations to fill up the gaps.

The following figure shows the flow of the study framework

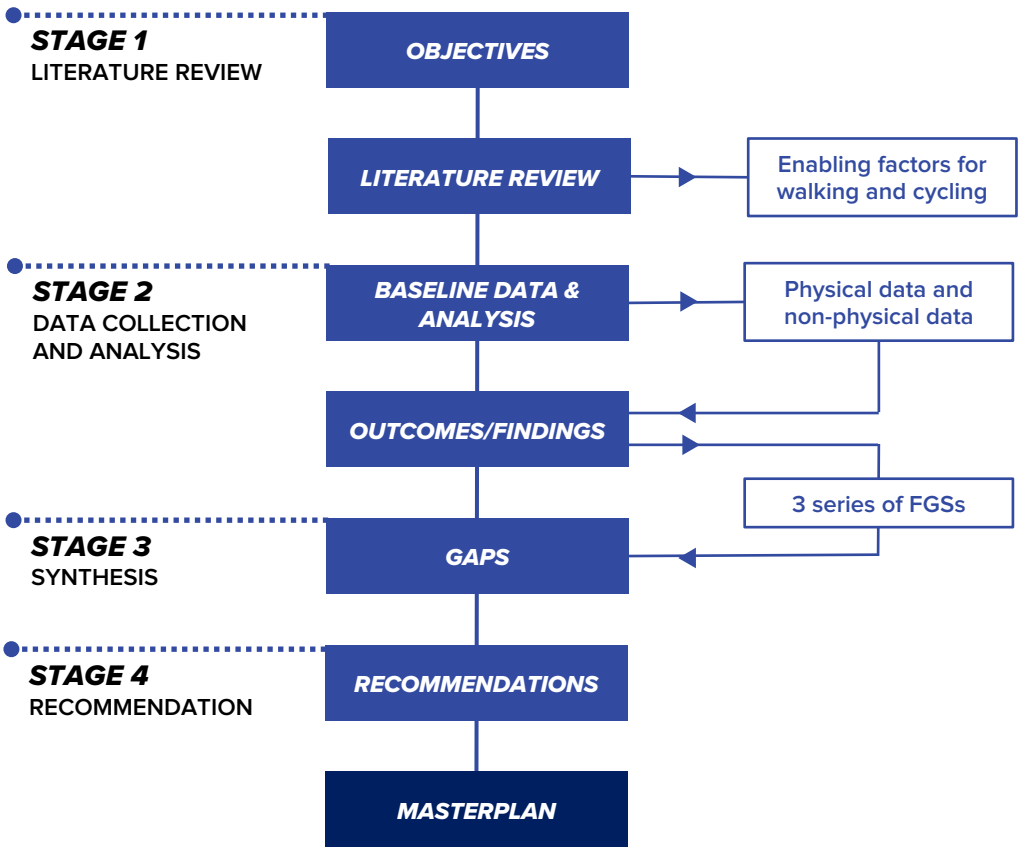


Figure 1.1 : The Flow of The Study Framework

Study Timeline

The project will be carried out over a period of five years, starting from February 2017. The first year will involve a baseline study and the development of a draft master plan. Year two will involve refinement of the draft master plan and a series of Focus Group Discussions (FGDs) and benchmarking exercises. The final master plan will be completed by the end of the second year. Years three to five will involve the development of a community support programme and post-implementation monitoring.

The following figure shows the detailed study timeline.

Figure 1.2 : Detailed Study Timeline

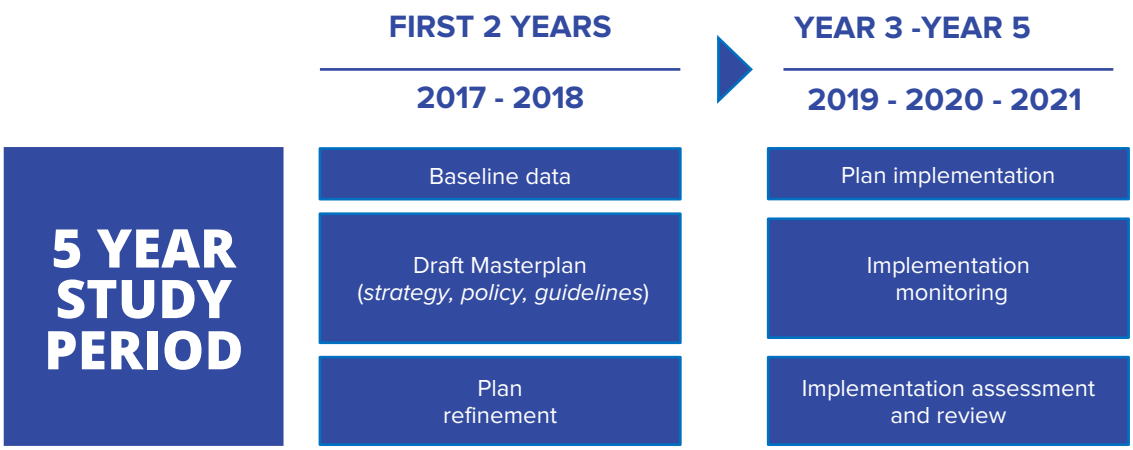


Photo Credit: Deva Darshan

Planning Context

This chapter summarises all pedestrian and cycling initiatives from existing national, regional and local plans into the planning context of Kuala Lumpur pedestrian and bicycle masterplan. It starts with highlighting the aspirations of the national level plan particularly The Economic Transformation Programme (ETP) before summarising the initiatives and programmes from other more specific and more local plans as fully listed in Table 1.1.

The aim of this plan review is to have an overall understanding and examine to what extent each plan delineates the initiatives, programmes and projects towards pedestrian and cycling. The extract from such plan analysis is important in setting out the initial policy direction of the study. The information from those plan is also essential for analysis and synthesis together with the data acquired from primary means such as user survey in this case. Furthermore, some of the information and strategies in the plans reviewed can be out of date thus updating them in this study becomes a necessity.

Having been in focus only recently with the emergence of climate change issues and the quest for a healthier urban lifestyle, walking and cycling have normally been left at the periphery of most development plans. Thus it is not surprising if all the plans that are evaluated here still treat walking and cycling with less priority compared to other forms of mobility. It is therefore the task of this pedestrian and cycling master plan to integrate all the strategies and programmes concerning promotion of walking and cycling into one document where they are the main focus.

National Level

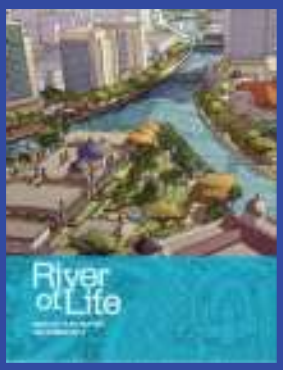
- Economic Transformation Prograrmme

Regional Level

- Klang Valley MRT System
- Greater Kuala Lumpur/Kalng Valley Land Public Transport Master Plan

Local Level

- Kuala Lumpur Structure Plan 2020
- Kampung Bharu Master Plan
- River of Life
- Kuala Lumpur Tourism Master Plan 2015-2025
- Kuala Lumpur Low Carbon Society 2030
- Pelan Induk Jejak Warisan Kuala Lumpur
- Think City Programmes



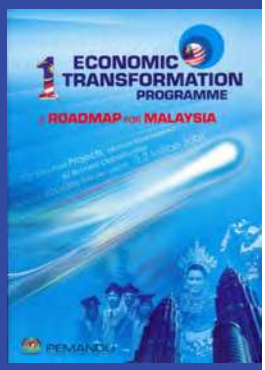


Table 1.1 : List of Plans

Economic Transformation Programme

As spelled out in the ETP, The Greater KL/KV NKEA's vision is **to achieve a top-20 ranking in city economic growth while being among the global top-20 MOST LIVEABLE CITIES by 2020.** To deliver The Greater KL/KV aspirations in achieving the vision, nine EPPs (Entry Point Projects) along four dimensions have been formulated. One of the four dimensions, Greater KL/KV Enhanced Services, calls for a well-functioning and liveable KL city that requires improving and seamless integration of the pedestrian walkways. The nine EPPs recommended in The Greater KL/KV NKEA are briefly described in Figure 1.3 and the three that have direct relation to the improvement of KL pedestrian walkways are discussed in the sections that follow.

EPP5: River of Life (RoL)

- The RoL project was initiated to transform the sections of the Klang and Gombak rivers flowing through the KL city centre into a vibrant and livable heritage and commercial waterfront with high pedestrian volume.
- The transformation is designed to encourage higher pedestrian and cycling traffic for better enjoyment of the historical landmarks and the aesthetics of the area.
- When fully completed in 2020, the RoL project is projected to transform the KL city centre, on par with other global cities. This would mean a Kuala Lumpur that is more walkable and livable.

EPP8: Comprehensive Pedestrian Network

- The EPP8: Comprehensive Pedestrian Network represents a part of a larger ambitious plan for making Kuala Lumpur a healthy and livable city partly by improving people mobility.
- The EPP aims to improve accessibility for pedestrians and the physically challenged by creating a fully integrated and barrier- free pedestrian network.
- The improvement has been carried out in compliance with the Safe City's CPTED (Crime Prevention Through Environmental Design) guidelines to ensure the safety and security pedestrians.

Kuala Lumpur Structure Plan 2040

- The Structure Plan has identified a hierarchy of pedestrian networks that are classified into major, primary and secondary pedestrian networks on the basis of their importance.

- The proposed networks and suggested improvements for pedestrian and cycling infrastructure as contained in The Structure Plan will be embedded in this pedestrian and bicycle masterplan after consolidation with recommendations from other related plans.

Kampong Bharu Master Plan

- Under the Master Plan, a network of 7.5km of pedestrian walkways and 4.4km of cycling paths have been identified either for construction or upgrading/improvement.

- The recommendations and pedestrian/cycling design principles from the Kampong Bahru Master Plan would be one of the important reference in the formulation of the Kuala Lumpur Pedestrian and Bicycle Masterplan.

The Greater KL/KV Land Public Transport Master Plan

- The Greater KL/KV Land Public Transport Master Plan (Greater KL/KV LPTMP) is an integrated 20-year transportation master plan to transform land public transport in Greater KL/KV.

- The Greater KL/KV LPTMP builds on the existing plans for consistency to provide a long-term transport plan that is crucial for the attainment of a world-class city status.

Mass Rapid Transit (MRT) System

The Mass Rapid Transit (MRT) system is a well-planned mass transit system comprises of three lines that are to be developed in three phases. With its estimated daily ridership of more than 1 million upon its full completion in 2022, the MRT system would need an integrated walking and cycling infrastructure at all its stations for a seamless first-and-last mile transition. The MRT stations would therefore be one of the focal points of the study of this pedestrian and bicycle masterplan

Sungai Buloh – Kajang Line

- The Sungai Buloh- Kajang (SBK) line begins from Sungai Buloh to Kajang
- Phase One of the MRT Sungai Buloh-Kajang Line from Sungai Buloh to Semantan began operations on 16 December 2016.
- The Phase Two, from Semantan Station to Kajang Station started its operations on 17 July 2017, allowing trains to run the entire alignment

Sungai Buloh – Serdang – Putrajaya Line

- The proposed MRT Sungai Buloh-Serdang-Putrajaya Line (SSP Line) alignment is 52.2 km of which 13.5 km is underground.
- The Phase 1 between Kwasa Damanasara and Kampung Batu expected to be operational by July 2021 and the remaining will be built and commencement of full service in the second quarter of 2022.

Circle Line

- The CIRCLE Line may cover a distance of between 45km and 48km or longer, depending on the final alignment.
- It will be integrated with the Sungai Buloh-Kajang (SBK) Line 1 and Sungai Buloh-Serdang-Putrajaya (SSP) Line 2.
- It has been indicated that plans are being drawn up to fast-track the construction of MRT 3 for completion before 2025.

Summary of Planning Context

A pedestrian and cycling master plan that provides seamless mobility and accessibility for all and that encourages walking/cycling as a healthier alternative lifestyle must take into consideration all aspects and modes of mobility. Undoubtedly, all existing plans and official documents and guidelines that influence decisions on all aspects about transportation and mobility from the higher to the local levels should be consulted. That is the only way that guarantees a complete and integrated master plan. Starting with the national Economic Transformation Programme (ETP) and then followed by the various local and subject plans including The Kuala Lumpur Structure Plan, The Kampong Baru Master Plan, The Klang Valley MRT Plan, etc., content analysis are carried out on those plans in order to identify their transportation policy directions. Comprehension of those current policy directions together with good analysis of the needs of potential pedestrians and cyclists would serve as a good formula for a comprehensive and practical master plan. A comprehensive pedestrian and cycling master plan would not only allow for an integrated and seamless travelling system but would also help Kuala Lumpur sustain the liveable city agenda where the quality of life and the environment is enhanced through improvements in smart mobility, paving the way for a healthy lifestyle, with priority focusing on the following components:

Foto: Deva Darshan

1 Increasing pedestrian and cycling safety

2 Providing mobility and accessibility for all

3 Reducing pollution, addressing global warming and becoming sustainable

4 Promoting walking and cycling as a healthy lifestyle

5 Ability to increase social interactions on streets

6 Fostering economic growth

7 Alternatives to driving especially for shorter distances

2

Chapter 02
SUMMARY OF FINDINGS

The chapter first outlines the terminologies and definitions used in the Masterplan. This is followed by the categories of land uses used to evaluate walking demand potential in Kuala Lumpur. Subsequently, a brief analysis of the public survey findings, culminating in the segmentation of users into four categories. The user segmentation guides the Masterplan's policy and action recommendations

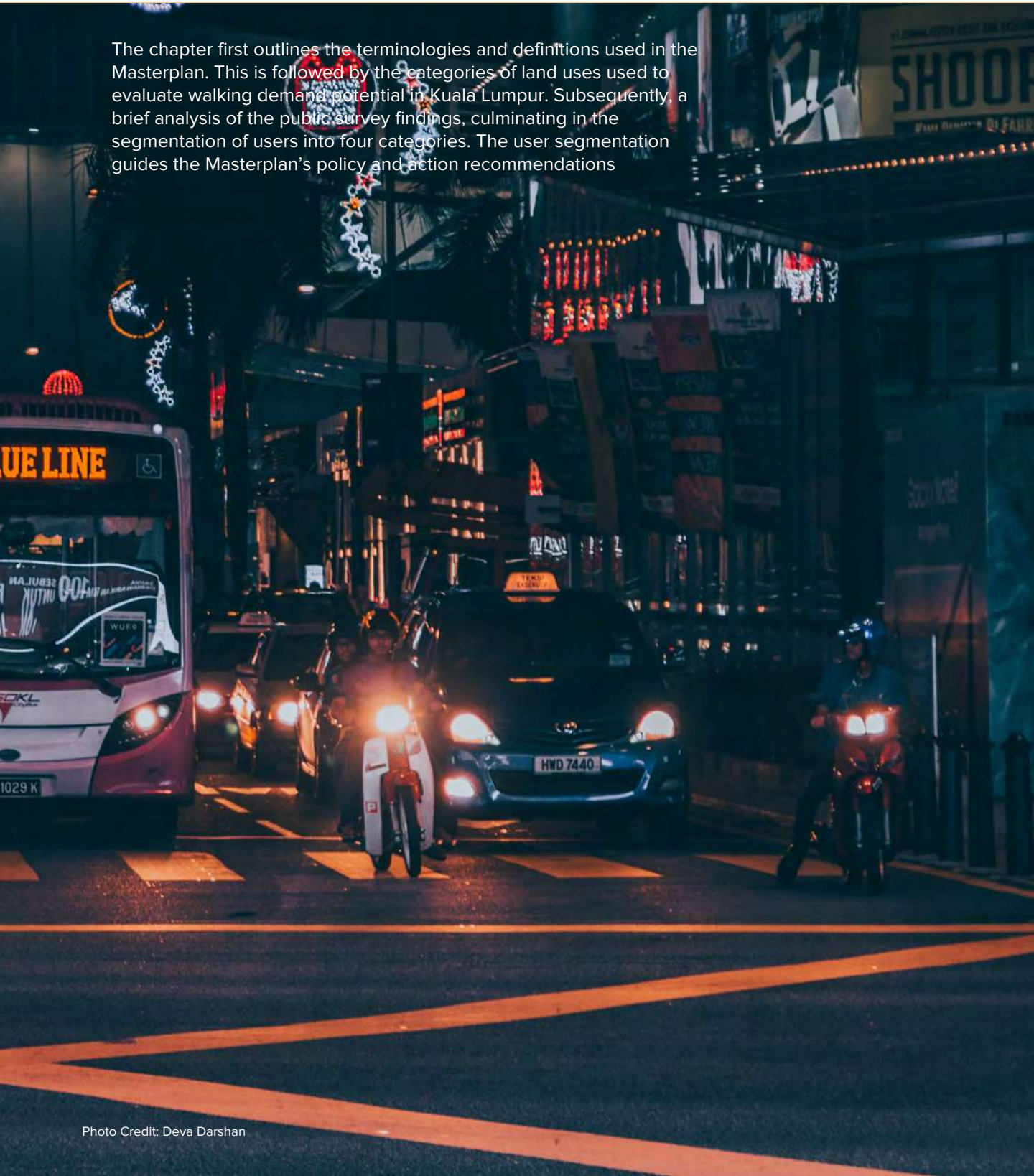


Photo Credit: Deva Darshan

Terminologies and Definitions

The terminologies and definitions used in this report. The purpose of these definitions are to ensure accuracy and consistency in the interpretation of the proposed policy framework. The table below shows the terminologies and definitions used in this report.

Table 2.1 : Terminologies and Définitions

Term	Definition
Walking	A form of travel on foot
Pedestrian	A person who walks or runs. Include those using tiny wheeled-vehicle e.g. wheelchairs, skateboard, roller skates/blades, scooters etc.
Walkway	A dedicated path/lane for pedestrians
Cyclists	A person who travels using bicycle
Bicycle	A two-wheeled, human-powered, pedal driven vehicle. Include electric bicycle which uses batteries as secondary source of power.
Bicycle lane	A dedicated path/lane for cyclists
Shared walkway/ bicycle lane	A dedicated path/lane for the shared use of pedestrians and cyclists
Population	For the purpose of this master plan, the study population is defined as any individual residing in Kuala Lumpur aged between 15-60 years old. This age group was selected as they represent teenagers and adults whom we assumed can freely determine and decide their choice of travel mode for commuting trips.
Samples/ Respondents	A subset of the population randomly selected to participate in the KL Pedestrian and Bicycle Masterplan survey
Commuting trip	A single, one-directional travel to and/or from home as pedestrians or cyclists for the purpose of work (home-to-work trips or work-to-home trips) or education (home-to-school or school-to-home trips)
Recreational trips	Trips to and/or from home as pedestrians or cyclists for purpose other than commuting or shopping.
EPEX	A form or construction of elevated pedestrian expressways

Categories of Land Uses

Prior to carrying out the user survey, a walking demand potential (WDP) map was generated to guide the subsequent user survey. In order to generate the WDP map, land uses were categorised according to potential walking / cycling demand. Table 2.2 to the right shows the three categories as well as the types of land uses belonging to each category.

The sum of each areas generated the WDP map, which in turn was used to select areas that potentially had high walking / cycling demand. Respondents were then randomly selected from these areas to participate in the survey.

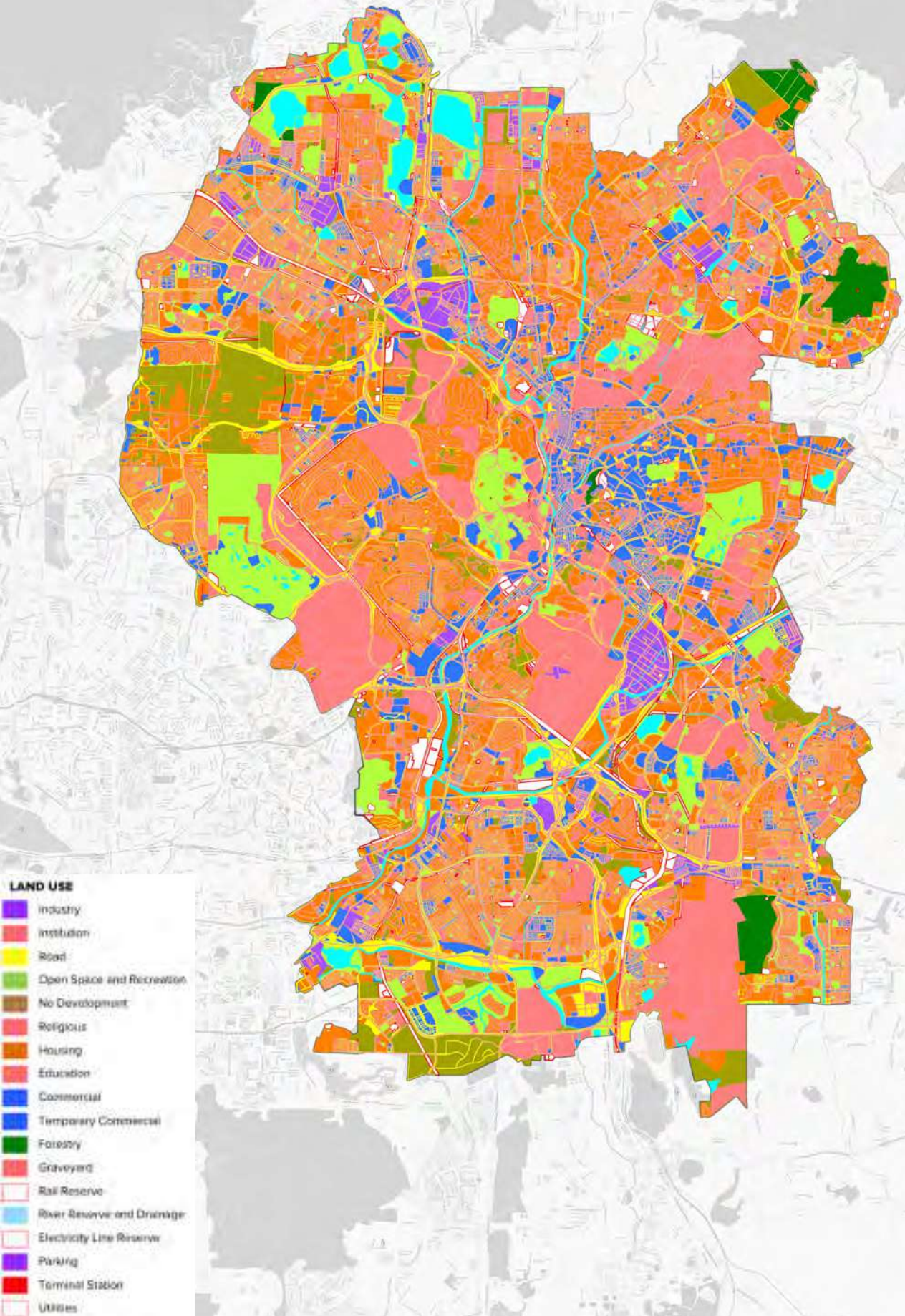
Table 2.2 : Walking and Cycling Demand Potential

Walking/Cycling Demand Potential	Places
High	University/college, attractions (e.g. museums, parks, etc.), apartments/condos/mixed-use, bus transfer points (5 destinations or more), LRT stations, retails centres in CBD
Medium	School, shared use trail (i.e. pedestrian + bicycle), grocery stores, hospital, libraries, community centres
Low	Stairs, bridges, overpasses, cafes, restaurants, local bus stops

Photo Credit: Omar Elsharawy

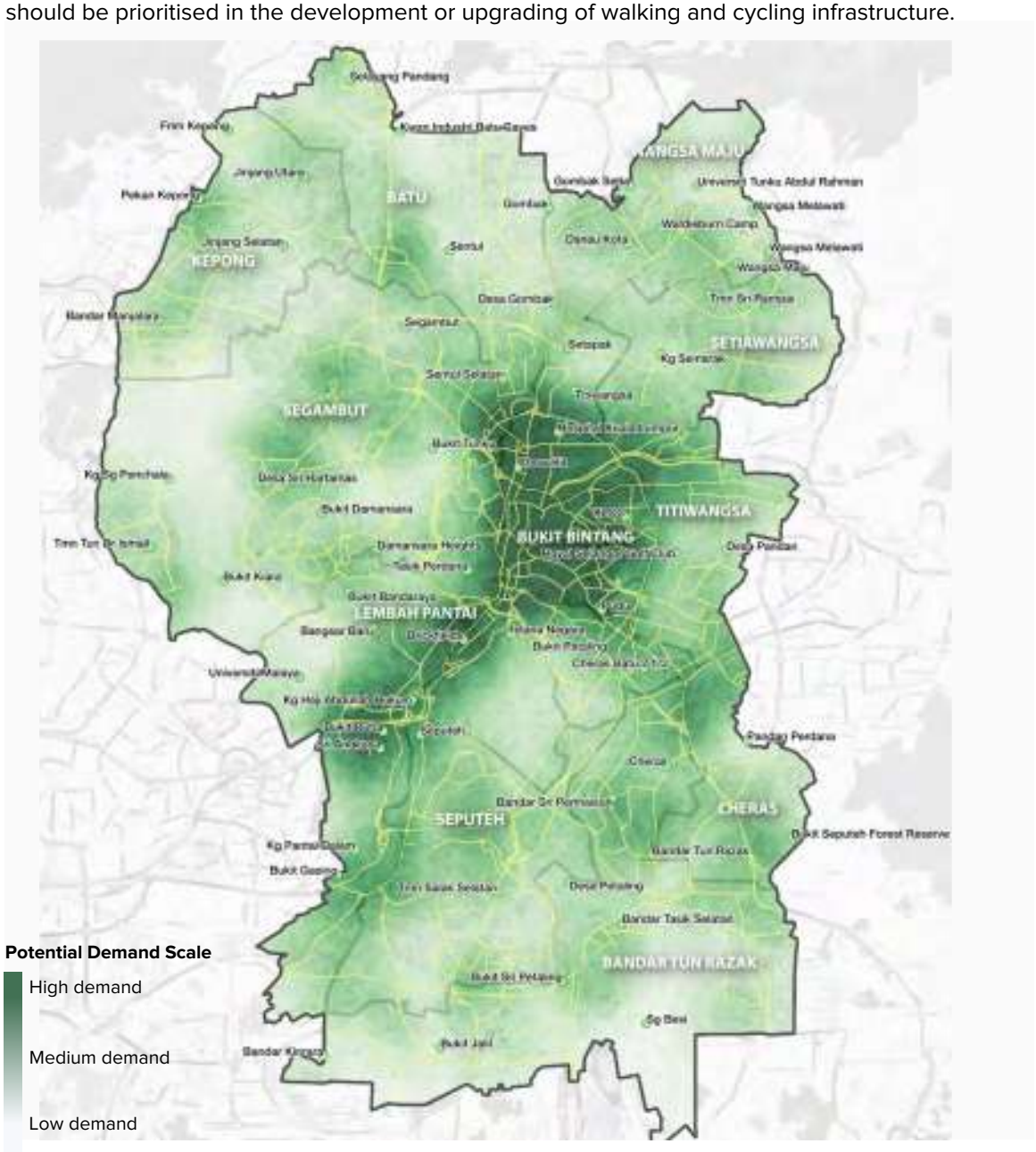
Table 2.3: Category of Land Uses

Category	Sub-category	Area (m^2)	(%)	Total %
High Walking Demand Potential	Universities and Colleges	1,429,698.33	0.56	**18.84%**
	Major Attraction and Parks	9,300,520.10	3.66	
	Transit Stations	838,412.40	0.33	
	Condominium and Apartments	20,880,656.20	8.21	
	Shopping Malls in CBD	9,850,220.30	3.87	
	Offices	4,260,000.99	1.67	
	Banks and Commercial Centres	505,425.28	0.20	
	Hotels	854,459.20	0.34	
Medium Walking Demand Potential	Shopping Malls Outside CBD	3,679,792.87	1.45	**18.41%**
	Schools	317,710.79	0.12	
	Retail Centres Outside CBD	458,758.96	0.18	
	Hospitals	7,907,057.47	3.11	
	Clinics	98,857.14	0.04	
	Markets	500,059.20	0.20	
	Neighborhood Parks	10,850,462.20	4.27	
	Hostels and Quarters	2,069,338.92	0.81	
	Institution and Community Uses	19,767,643.70	7.77	
	Religious	1,168,099.94	0.46	
Low Walking Demand	Neighborhood Retail	248,456.92	0.10	**21.55%**
	Restaurants	102,451.63	0.04	
	Landed Housing	50,360,225.85	19.80	
	Kindergartens	158,855.37	0.06	
	Others	3,953,528.74	1.55	
Others	Road Reserve	68,610,263.00	26.97	**41.20%**
	Undeveloped Land	13,072,337.54	5.14	
	Forestry	3,386,663.96	1.33	
	Graveyard	3,087,561.00	1.21	
	Rail Reserve	1,862,635.77	0.73	
	Drainage and River Reserve	7,905,182.88	3.11	
	Electricity Reserve	2,448,977.99	0.96	
	Parking	1,055,625.26	0.41	
	Utilities	3,410,120.10	1.34	
	TOTAL	**149,560,693.00**	**100%**	**100%**


LAND USE
Industry
Institution
Road
Open Space and Recreation
No Development
Religious
Housing
Education
Commercial
Temporary Commercial
Forestry
Graveyard
Rail Reserve
River Reserve and Drainage
Electricity Line Reserve
Parking
Terminal Station
Utilities

High Walking Demand Potential Areas in Kuala Lumpur

The density map shows the concentration of land uses with high walking demand potential (e.g. educational institutions, commercial complexes, government complexes, hospitals, apartments/condominiums/flats, etc.), As a result, the map (shown below), shows that the CBD of Kuala Lumpur towards Lembah Pantai represents the area with the highest walking demand potential. Medium potential demand is scattered at the various neighbourhoods of KL, such as Cheras, Seputeh, Segambut and other places. The findings show the high demand areas which should be prioritised in the development or upgrading of walking and cycling infrastructure.



What the Public Says

Based on public survey participated by 1320 respondents

– Reasons Not to Walk/Cycle in KL

- fear for personal safety was a major reason for not walking in KL for 54% of the respondents.
- Only 12% of the respondents do not think personal safety is an issue to be a reason for not walking in the streets of Kuala Lumpur.
- fear for injury from traffic accidents (i.e. unsafe traffic) and from crossing intersections are the main reasons for not walking in KL streets. 50%
- Land use connectivity (i.e. distance too far) is a major issue for 52% of the respondents. In other words, how walkways connect land uses to form a network of pedestrian walkways is a very important consideration for the residents of Kuala Lumpur to take up walking as their choice of travel mode.

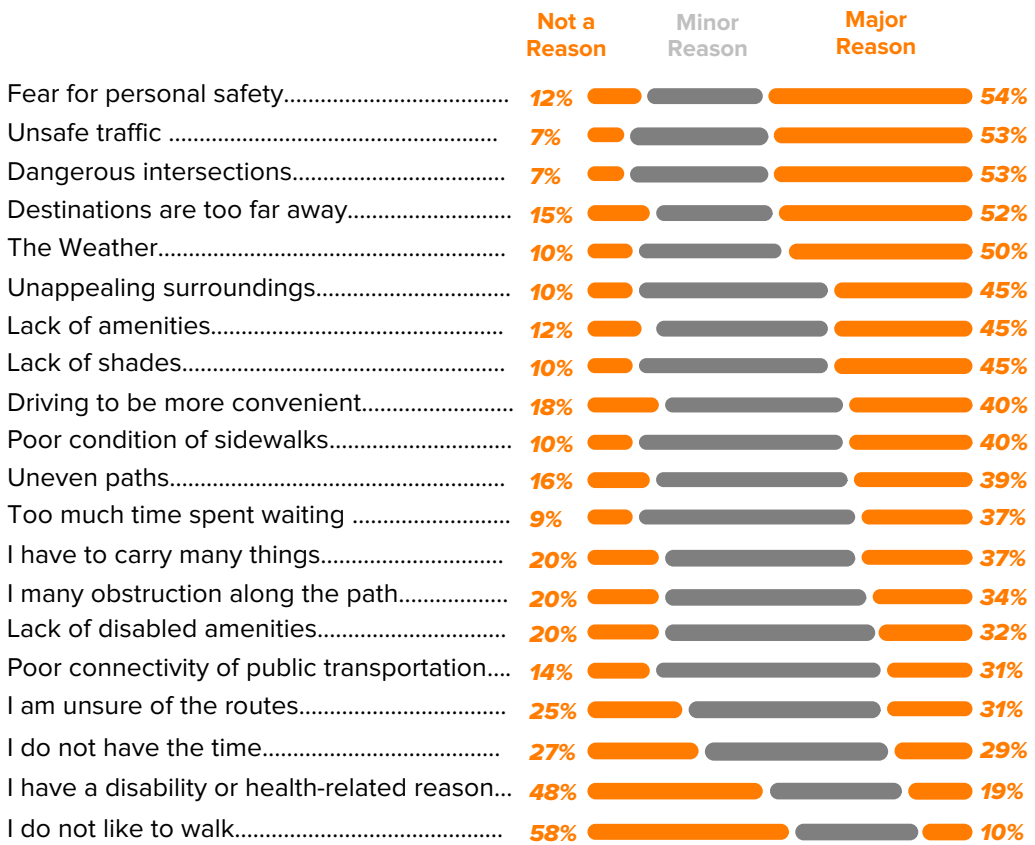


Figure 2.1 : Reasons Not to Walk/Cycle in Kuala Lumpur

What the Public Wants

Based on public survey participated by 1320 respondents

Importance Influenced to Walk/Cycle in KL

- The Top 3 reasons with more than 60% responses are “to make walkway safer" (67%); “having better lightings and security measures” (61%); and “better separation between pedestrians and vehicular traffic” (61%).
- Of interest is that respondents are also concerned for a lack of enforcement to curb motorists behaviour that encroach into pedestrian walkways. 93% of the respondents thinks that law enforcement is important to encourage walking.
- Respondents are also concerned about comfort level when walking. Issues like shades, resting places, plazas, walkway surfaces etc. are consistently rated as important to the respondents.
- Apart from physical aspects, pedestrian education is also high on the list of important reasons to encourage walking in KL streets. Through education, the benefits of walking as well as safety/security skills and knowledge can be imparted into the population.

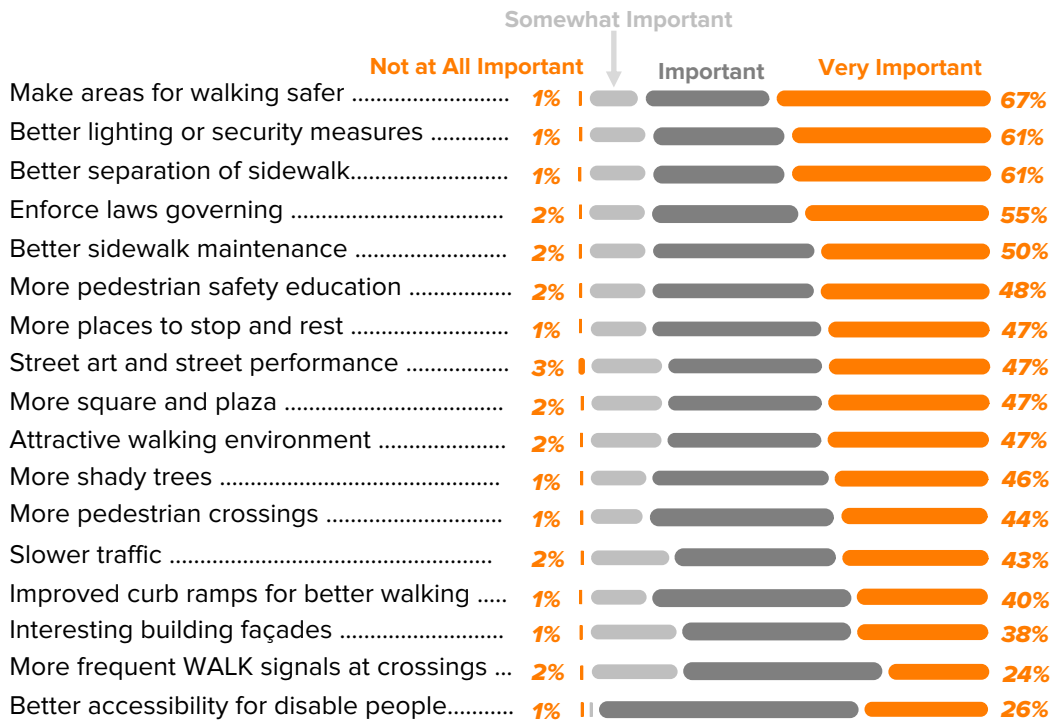


Figure 2.2 : Importance of The Following to Walk More in KL?

Segmentation of Pedestrians and Cyclists

Based on the user profile of the respondents and the characteristics of travelling behaviour in relation to walking and cycling for daily commuting, the users can be divided into FOUR distinct segments

- **Enthusiastic and Confident** – characterised by the choice of walking/cycling as their preferred travel mode for daily commuting trips. This group who frequently walks/cycles represents 8% of the population.

- **Interested and Concerned** –characterised by their adoption walking/cycling for daily commuting trips, but may sometimes use motorised vehicles depending on situations. This group who sometime walks/cycles represents 9% of the population.

- **No Way, No How** – characterised by total rejection of walking/cycling as an alternative travel mode for daily commuting trips and totally embraced motorised trips as the ONLY travel mode. At 82% of the population, this group represents the majority of the people of Kuala Lumpur.

- **Fearless** – characterised by the TOTAL adoption of walking/cycling as their ONLY travel mode regardless of situation. To this group, walking/cycling is a form of urban lifestyle. Unfortunately, this group only represents 1% of the population.

Enthusiastic and Confident	Strong and Fearless	Interested and Concerned	No Way No How
			
8%	**1%**	**9%**	**82%**
▪ People who frequently walk / cycle to work / school (First mile – last mile)	▪ Enthusiastic and adventurous cyclists	▪ People who sometimes walk / cycle to work / school (First mile – last mile) ▪ Recreational cyclists	▪ People who never walk / cycles to work / school

Figure 2.3 : Segmentation of Pedestrians and Cyclists

Segment 1: Enthusiastic and Confident (8%)

Representing 8% of the KL population, this group choose walking/cycling as their preferred travel mode for their daily commuting trips.

- For working trip (i.e. home-work vice versa), the majority work in the private sector (4%), while only 2% are employed in the government sector.
- For educational trip (i.e. home-work vice versa), 1.2% are university students while 0.8% are school children between 15-18 years old.
- Due to lack of viable transportation alternatives, this segment is considered "captive users". Thus, this group walk/cycle exclusively or use public transportation for the major part of their journey. They wall/cycle daily or very frequently on a fixed route. Improvement in first- and last-mile experience will greatly improve the quality (e.g. faster, shorter, cheaper) of trips made by this segment

Table 2.4: Segment 1- Enthusiastic and Confident

SUB SEGMENTS	School Children	University Students	Government Workers	Private Sector Employees
	0.8%	1.2%	2%	4%
MOTIVATION	• Short distance (school is located near home)	• No alternatives due to cost and time • Short distance (workplace / school is located near home or public transit) • Save money	• No alternatives due to cost and time • Flexibility • Short distance (workplace is located near home or public transit) • Save money	• No alternatives due to cost, time, age, etc. • Flexibility • Short distance (workplace is located near home or public transit) • Save money
CHARACTERISTICS	• Use the same route everyday • Walks or cycles the first and last mile • Mainly walk and cycle for recreation and exercise • Travel pattern dictated by parents	• Use the same route everyday • Walks or cycles the first and last mile • Mainly walk and cycle for recreation and exercise	• Use the same route everyday • Walks or cycles the first and last mile • Mainly walk and cycle for recreation and exercise	• Use the same route everyday • Walks or cycles the first and last mile • Mainly walk and cycle for recreation and exercise

Segment 2: Strong and Fearless (1%)

This segment consists of mainly the youngsters or the millennial who adopted walking/cycling as a form of urban lifestyles. This segment represents only 1% of the population. Even though this segment is very small in numbers, they are very active in promoting walking and cycling to others.

In Kuala Lumpur, they regularly conduct workshops and seminars to introduce walking and cycling to the masses as an active form of transportation, as well as to educate the people on the benefits of walking and cycling.

This group needs little or no incentive to entice them to walk or cycle. Instead, this group requires recognition and assistance to motivate them to do more and to make their effort more effective. Due to the nature of their activities which targeted the people at large, they have a lot of useful first-hand information on how to make walking and cycling the preferred mode of travel.

Table 2.7: Segment 4-Strong and Fearless

SUB SEGMENTS	Group / Association
	1%
MOTIVATION	• Sustainability in urban mobility • Responsibility towards the environment, culture, community, etc. • Lifestyle choice
CHARACTERISTICS	• Frequently cycle to workplace or other places as well as for recreational purposes • Willing to travel long distances using active transportation • Well-educated • Young and middle-aged groups • Advocate for increased use of active transportation

Segment 3: Interested & Concerned (9%)

This segment is characterised by users who may have alternative travel mode but adopted walking/cycling for their daily commuting trips more than once a week. This segment represents 9% of the population.

- For both working and educational trips, the segment is almost equally divided between private/government sector and university/school, respectively.

This segment represents "volatile users" who may easily change to alternative travel modes other than walking/cycling when the situation does not favour walking/cycling or when walking/cycling is not convenient, e.g. when it's raining. Their motivation to walking/cycling may change depending on various factors e.g. traffic and weather conditions as well as travel costs. For this group, constant motivation (e.g. sheltered walkways, subsidised fare, etc.) that favours walking/cycling must be provided to entice them to continuously choose walking/cycling.

Table 2.5: Segment 2-Interested and Concerned

SUB SEGMENTS	School Children	University Students	Government Workers	Private Sector Employees
	1%	1%	3%	4%
MOTIVATION	• Convenience • Flexibility 	• Save time • Convenience • Flexibility 	• Save time • Convenience • Flexibility 	• Save time • Convenience • Flexibility 
CHARACTERISTICS	• Choose to drive or walk based on certain conditions (e.g. traffic, weather, etc.) • Use the same route everyday • Walks or cycles for recreation/ leisure	• Choose to drive or walk based on certain conditions (e.g. traffic, weather, etc.) • Use the same route everyday • Walks or cycles for recreation/ leisure	• Choose to drive or walk based on certain conditions (e.g. traffic, weather, etc.) • Use the same route everyday • Walks or cycles for recreation/ leisure	• Choose to drive or walk based on certain conditions (e.g. traffic, weather, etc.) • Use the same route everyday • Walks or cycles for recreation/ leisure

Segment 4: No Way No How (82%)

For this group, driving and private vehicles are their ONLY choice of travel mode. They represents the majority of the KL population (82%).

- For working trips, private sector employees (43%) outnumbered public sector (i.e. government) employees by 15%.
- For educational trips, the proportion is almost equally divided between university students and school children, at 6% and 5%, respectively.

This group does not like walking/cycling and they have many reasons for avoiding active mobility. Most of the reasons for not walking/cycling centred upon the issues of personal safety and security as well as lack of comfortable and well connected walkways/cycle lanes. To this group, driving is the most convenient form of transportation. Hence, it is imperative that benefits of walking/cycling must outweigh the benefits of using private vehicles before this segment considers to abandon their car in favour of walking and cycling.

Table 2.6: Segment 3-No Way No How

SUB SEGMENTS	School Children	University Students	Government Workers	Private Sector Employees
	5%	6%	28%	43%
MOTIVATION	• Driving is the more convenient mode • Safety 	• Driving is the more convenient mode 	• Driving is the more convenient mode 	• Driving is the more convenient mode 
CHARACTERISTICS	• Do not like to walk or cycle • Travel pattern dictate by parents	• Uses a car/motorbike to travel everywhere (driving is perceived as more convenient) • Do not like to walk or cycle	• Uses a car to travel everywhere (driving is perceived as more convenient) • Use the same route everyday • Do not like to walk or cycle	• Uses a car to travel everywhere (driving is perceived as more convenient) • Use the same route everyday • Do not like to walk or cycle

Photo Credit: Benjamin Sow

3

Chapter 03
TARGET GROUPS AND PROJECTIONS

Target Groups and Projections detail out the targeted groups that the Kuala Lumpur Pedestrian and Cycling Masterplan is focusing on and their projections. The chapter first outlines the target groups and user projections that form the basis of the Masterplan, then goes on discussing the group requirements and target setting.

The strategies and actions formulated for these groups are meant for implementation within three distinct phases, i.e. short term (2019-2020), medium term (2021-2023) and long term (2024-2028).

Photo Credit: 9M Studio

Target Groups

Four target groups have been identified that will be the basis for the projections and recommendations. The following table describes the key behaviours and prospects of each target group. From the four target groups, three groups are seen as active mobility-positive (Interested and Concerned, Strong and Fearless, Enthusiastic and Confident), while the No Way No How group is seen as active mobility-negative. Therefore, the strategies and actions proposed in this plan will aim to increase the proportion of the positive groups, while reducing the negative group.

Table 3.1 : Target Groups

Interested and Concerned	Enthusiastic and Confident	Strong and Fearless	No Way No How
9%	**8%**	**1%**	**82%**
• **Easy to push towards the Enthusiastic and Confident segment as they already have a desire to walk** • Improving connectivity and infrastructure will further encourage this group to walk or cycle more (e.g. MRT phase 3) • Enhancing safety, incentives and educational programmes will persuade this segment to use public transport and walk more	• **Walking and cycling part of their culture and should be rewarded with recognition and to improve safety** • Need acknowledgement as equal road users from motorists	• **An emerging urban lifestyle that might attract more followers among millennials.** • Future provision of dedicated cycling facilities will further encourage an expansion of this healthy and contemporary lifestyle (MRT, Bicycle Lane by DBKL-Urbanice, etc.)	• **A large proportion of commuters who rely on driving which needs to be reduced** • **Change in attitudes and mindset need to be cultivated through radical means such as the introduction of area road pricing, congestion tax, etc.** • Significant cost increase for using private motorised transport will force this segment to use public transport and walk

Photo Credit: 9M Studio

Group 1: Interested and Concerned

The table shown the interested and concerned from Group 1. It have motivation, trip behavior, enabling factor which divided into two : physical and non physical and target.

Table 3.2 : Group 1: Interested and Concerned

Motivation	Trip Behavior	Enabling Factor		Target
		Physical	Non Physical	
• Weighing transport alternatives that save money, time and ensure safety and comfort	• Flexible choice of mode of transport • May choose to drive or walk or cycle based on certain conditions (e.g. trip purpose, traffic, weather, etc.) • Cycle for recreational purposes • Use the same route everyday • Walks or cycles for recreation/ leisure	• Improve existing pedestrian facilities with better maintenance • Improve safety and security on the existing pedestrian pathway with railing, CCTV, etc. • Provision of pedestrian comfort through covered pathways and amenities • Provision of dedicated bicycle lanes • Implement full or partial road closure at high walking demand potential areas such as Jalan Bukit Bintang, Kg. Baru, etc. • Develop interactive connectivity with informal activities and facilities upgrading	• Provision of interactive and innovative incentives • Champion walking and cycling through educational programmes involving role models and brand ambassadors • Need to empower local community to initiate security programmes such as patrolling parents (as guides to school) • Improve safety by educating motorists to respect pedestrians and cyclists • Better enforcement	• Target annual increase of 2-3% of users

Group 2: Enthusiastic and Confident

The table shown the enthusiastic and confident from Group 2. It have motivation, trip behavior, enabling factor which divided into two : physical and non physical and target.

Table 3.3 : Group 2: Enthusiastic and Confident

Motivation	Trip Behaviour	Enabling Factor		Target
		Physical	Non Physical	
• Most convenient and low cost mode • Short distance (workplace / school is located near home	• Use the same route everyday • Walks or cycles the first and last mile • Also walks and cycles for recreation and exercise	• Enhance comfort with covered pedestrian pathways • Provision of safe bike expressways • Need to connect public places with better spatial connectivity and facilitate street activities to create vibrancy and make walking a pleasant and enjoyable experience	• Need acknowledgement and better protection as equal road users • Need to increase safety and security with integrated approaches involving local community associations • Enhance seamless travel (accessibility and connectivity) • Improve safety by educating motorists to respect pedestrians and cyclists • Better enforcement	• Target annual increase of 1-2% of users

Group 3: Strong and Fearless

The table shown the strong and fearless from Group 3. It have motivation, trip behavior, enabling factor which divided into two : physical and non physical and target.

Table 3.4 : Group 3: Strong and Fearless

Motivation	Trip Behaviour	Enabling Factor		Target
		Physical	Non Physical	
• Emerging urban lifestyle through clubs and associations • Counter counter that could be attractive to millennials	• Frequently cycle to workplace or other places as well as for recreational purposes • Willing to travel long distance using active transportation • Well-educated • Millennials and middle-aged groups • Advocate for increased use of active transportation • Responsibility towards the environment, culture, community, etc	• Provision of bike expressways will increase the visibility of this segment towards the creation of role models for an independent, vibrant and healthy lifestyle.	• An emerging urban lifestyle that might attract more followers among millennials. • Future contribution from new real estate developments to partially finance bike expressway • Educational and public awareness campaigns should showcase individuals in this segment as role models (e.g.: Azizul Awang). • Reduction of import tax on high end bicycles	• Target annual increase of 1-2% of users

Group 4: No Way No How

The table below shown the no way no how from Group 4. It have motivation, trip behaviour, enabling factor which divided into two : physical and non physical and target.

Table 3.5 : Group 4: No Way No How

Motivation	Trip Behaviour	Enabling Factor		Target
		Physical	Non Physical	
• Driving is seen as the most convenient mode	• Uses a car to travel everywhere (driving is perceived as most convenient) • Do not like to walk or cycle	• To be introduced once seamless connectivity is created through an efficient public transportation network that is complemented by pedestrian / cycling network. • Introduction of area road pricing	• Impose hard enforcement such as increasing parking rates • Organise dedicated awareness programmes • Requires carrot and stick approaches	• Target annual decrease of 1-3% of users

Photo Credit: 9M Studio

User Projections

Projections of each groups were calculated based on their prospects and requirements. The yearly increments or reductions of each group were mapped out over the short, medium and long term. The following figure presents the projected targets of each of the four user groups: The findings of the user survey revealed that only 18% of users chose to walk or cycle as their preferred mode of travel to their workplace or school within Kuala Lumpur. The proposed strategies and actions aim to increase this number to 40% of users by the year 2028.

The figures in the following pages show the detailed key enabling factors that need to be introduced or developed in order to meet the projected targets. Through the implementation of the strategies and actions proposed in this report, it is projected that each of the three active mobility-positive user groups will increase to comprise of 40% of the total users, while the No Way No How group will decrease to 60%. The following figure summarises the key enabling factors that will be implemented to trigger this change:

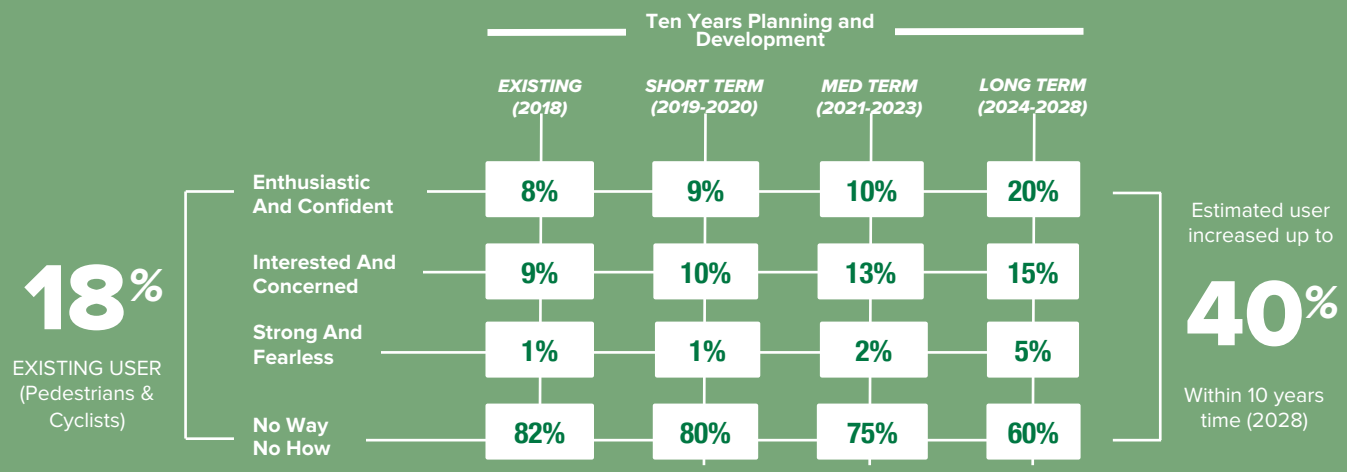


Figure 3.1 : User Projections

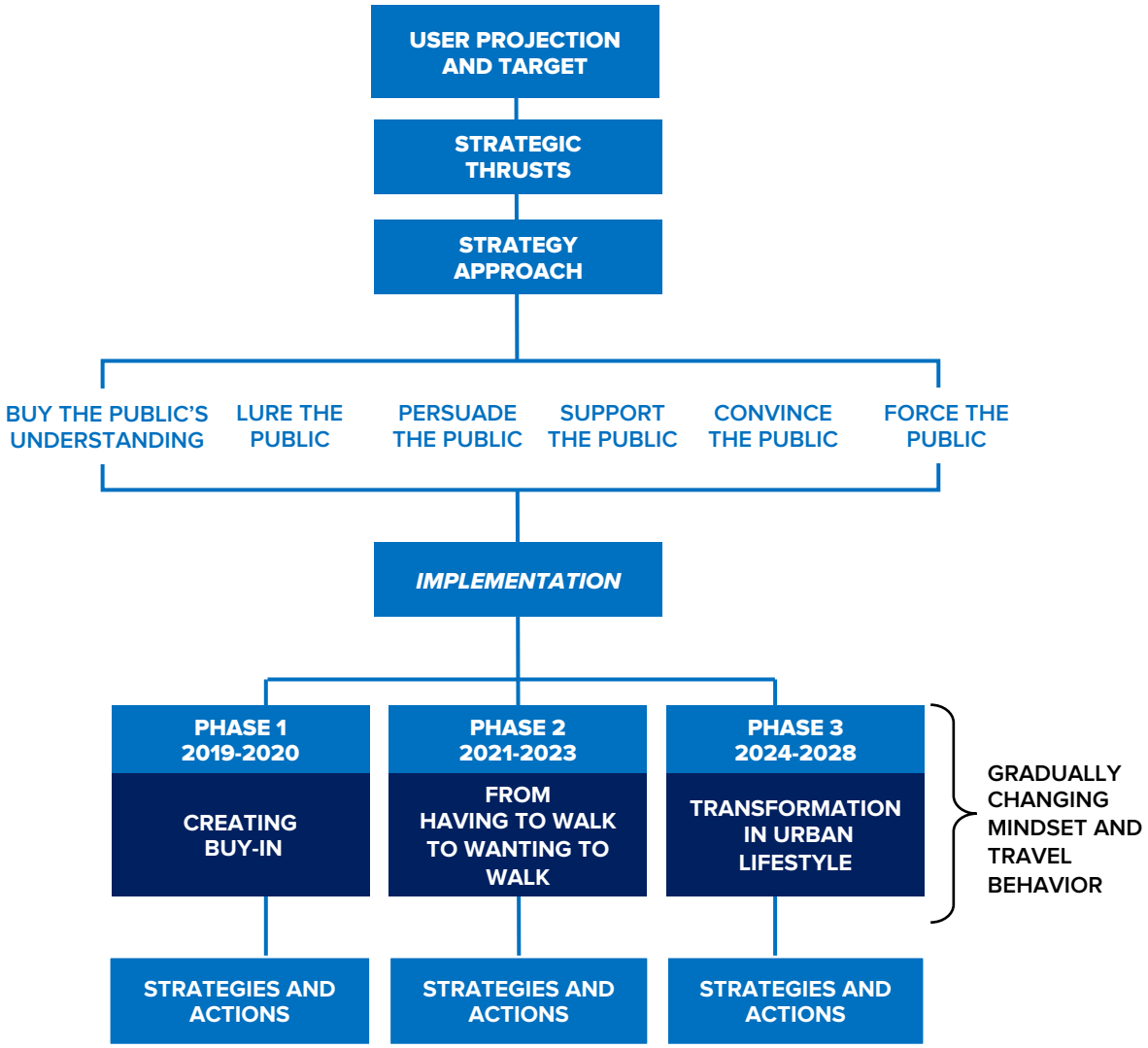
4

Chapter 04
STRATEGIES AND ACTIONS

This chapter describes the proposed strategies and actions in the Kuala Lumpur Pedestrian and Cycling Masterplan 2019-2028. In total the Masterplan proposes 21 strategies and 85 actions. For the sake of clarity, several of the actions are further illustrated in the form of detailed action plans.

Strategy Framework

The strategic framework provides the 'theory of change' for the incremental transformation of mindset and travel behaviour to achieve the target of increasing walking and cycling among KL residents from 18% to 40% by 2028. Towards this end the strategic framework comprises six approaches; beginning from creating general awareness about the efforts by DBKL in championing walking and cycling over a 10 year planning horizon. The strategic approach combines the use enticement, persuasion and enforcement over an three implementation phases. In turn the implementation phases are differentiated to achieve three distinct objectives, namely creating 'buy in', 'from have to walk to want to walk' and the eventual transformation in the urban lifestyle in Kuala Lumpur.



Strategic Approach

The following is a detailed description of the six strategic approaches that provide the basis for the formulation of the strategies and actions. These approaches contain both 'carrot and stick' approaches in which users are to be initially informed about the importance of active mobility, before they are convinced to walk and cycle more. Ultimately the persuasive approaches should be complemented by radical measures to force residents and commuters to pay more to drive into the CBD.

Approach 1:

Buy The Public Understanding

Inform the public about DBKL's aspiration to encourage walking and cycling as part of the liveable city agenda

Approach 2:

Persuade The Public

Improve walking and cycling facilities and infrastructure to provide safety, comfort and seamless connectivity

Approach 3:

Lure The Public

Attract the public to walk and cycle through the use of innovative and interactive incentives and rewards

Approach 4:

Convince The Public

Convince the public by intensifying measures in ensuring the real and perceived safety of pedestrians and cyclists

Approach 5:

Support The Public

Support community driven initiatives to connect walking and cycling corridors with vibrant public places through placemaking

Approach 6:

Force The Public

Force the public to pay more for driving into the CBD by implementing the Area Road Pricing mechanism.

Strategies and Actions

The Master Plan proposes a total of **21** strategies and **85** actions according to three development phases. As highlighted earlier the strategies and corresponding actions are intended to gradually transform the mindset and travel behaviour of KL residents and commuters to achieve the target of 40% active mobility by 2028

21 → **85** → **40%**

STRATEGIES | **ACTIONS** | **ACTIVE MOBILITY USERS**

PHASE 1 2019-2020	PHASE 2 2021-2023	PHASE 3 2024-2028
CREATING BUY-IN	FROM HAVING TO WALK TO WANT TO WALK	TRANSFORMATION IN URBAN LIFESTYLE
7 STRATEGIES **31** ACTIONS	**9** STRATEGIES **33** ACTIONS	**5** STRATEGIES **21** ACTIONS

Detailed Strategies and Actions

This section describes the **21** strategies and **85** actions in detail.

PHASE 1 2019-2020	PHASE 2 2021-2023	PHASE 3 2024-2028
CREATING BUY-IN	**FROM HAVING TO WALK TO WANT TO WALK**	**TRANSFORMATION IN URBAN LIFESTYLE**
1. Establish a Governance Structure to Implement the KL Pedestrian and Cycling Masterplan	1. Nurturing Community Based Placemaking Connected To Walking and Cycling Corridors	1. Branding KL As Malaysia's Premier Walking and Cycling City
2. Improving Existing Pedestrian and Cycling Infrastructure	2. Introducing the Pedestrianisation of Streets With Heavy Pedestrian Traffic In Vibrant Areas	2. Intensifying The Creation of Vibrant Urban Spaces and Streets
3. Ensuring Safety For All Segments Of Pedestrians Through Proper Sidewalk Design, Planning, Construction And Maintenance	3. Developing Practical Tools For Trip Planning And Wayfinding	3. Consolidating Community Driven Surveillance Through The Use of Information Technology
4. Stepping Up The Enforcement To Protect The Rights and Safety of Pedestrians and Cyclists	4. Mainstreaming Community Placemaking Projects Through Smart Partnerships	4. Introducing Radical Measures In Reducing Motorised Traffic In The Central Business District
5. Alleviating Real and Perceived Crime Involving Pedestrians Through Better Policing with the Use Of Technology	5. Sustaining The Impact Of The Communications Plan	5. Embracing Big Data Analytics As The Technological Tool For The Kuala Lumpur Smart Mobility Initiative 2024
6. Consolidating Community Programmes on Safe and Defensive Cycling	6. Developing A Cycling Culture From An Early Age	
7. Designing And Piloting A Five-Year Communications Plan To Champion Walking and Cycling	7. Creating A Pro-bicycle Environment By Sustaining Physical Improvements	
	8. Creating Financial Incentives To Encourage Cycling Among Urban Commuters	
	9. Complementing Financial Incentives With Non-Monetary Measures	

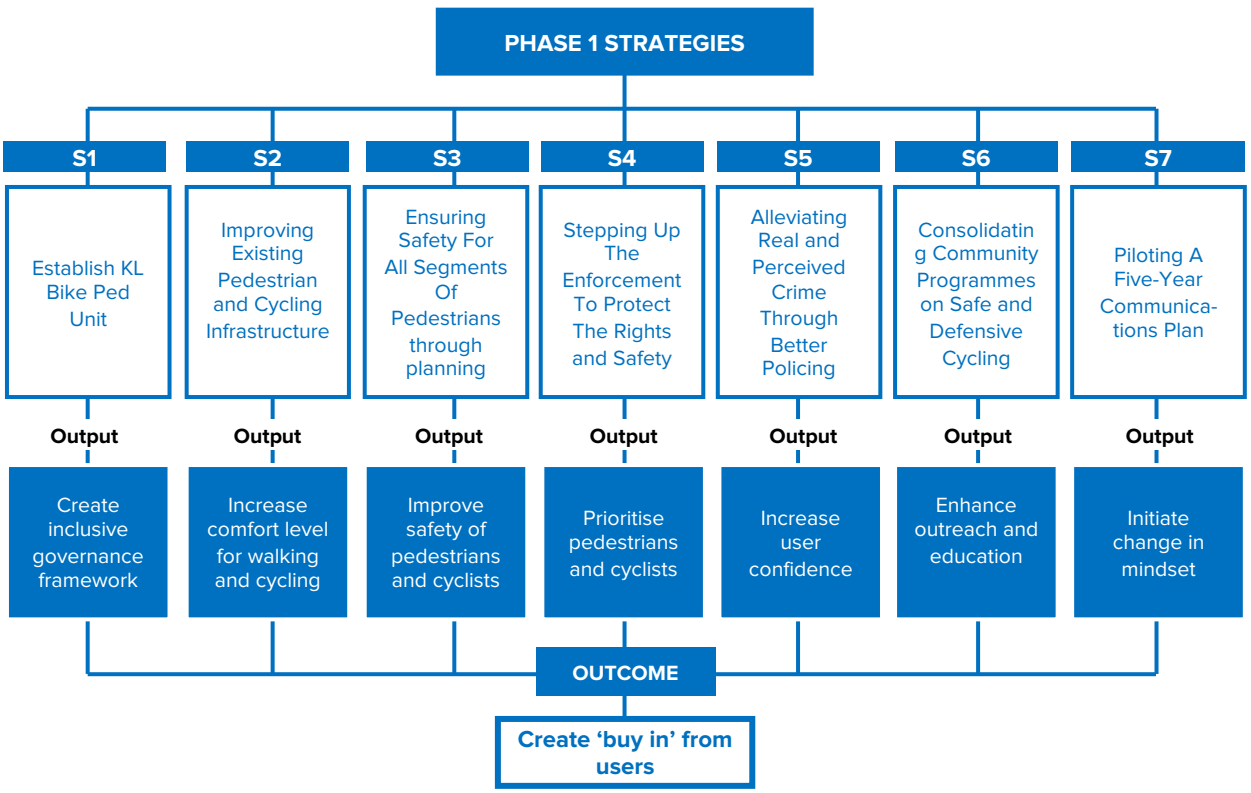
Phase 1: Creating Buy-In

Creating initial buy in from key stakeholders is crucial towards the incremental process of mindset and behavioural change. The process should start by focusing on efforts in improving the safety and comfort levels of pedestrian sidewalks and cycling paths to create a 'feelgood' factor among users. Central to the improvement in physical infrastructure and facilities is seamless connectivity as part of the first mile/last mile continuum. In tandem with physical improvements, the effective execution of a communications plan is essential to lure, persuade and support the public as they build up the momentum for behavioural change.

Photo Credit: 9M Studio

Schematic Diagram of Recommendation In Phase 1

The following schematic diagram links the strategies in Phase 1 with the expected output of each strategy and the overall outcome. Detailed of each strategy are described in the following section.



STRATEGY P1-1:
Establish a governance structure to implement the Kuala Lumpur pedestrian and cycling masterplan

DESCRIPTION:
A dedicated governance structure within DBKL is critical in ensuring the effective implementation of the KL Pedestrian and Cycling Master Plan. Central to the governance structure is the equal representation from the relevant government agencies, cycling NGOs, the private sector and local community representatives.

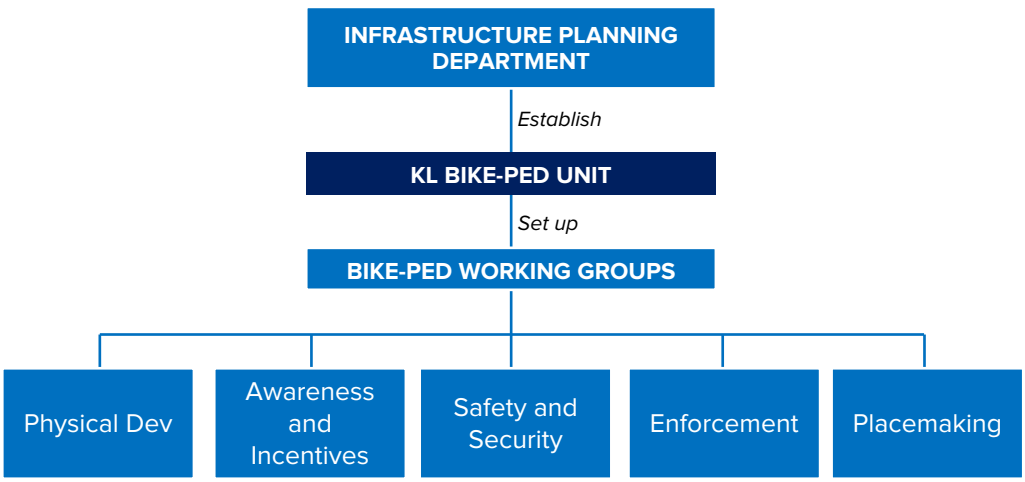
No	Action	Implementing Agency
Action 1	To establish a dedicated Kuala Lumpur Bike-Ped Unit to monitor the implementation of the KL Pedestrian and Cycling Master Plan 2019-2028	• DBKL (L) • JPA
Action 2	To set up working groups under the Kuala Lumpur Bike-Ped Unit to be represented by government agencies, the private sector and NGOs	• DBKL (L) • Cycling NGOs • Private sectors

DETAILED ACTION 1:

To establish a dedicated Kuala Lumpur Bike-Ped Unit to monitor the implementation of the KL Pedestrian and Cycling Master Plan

Description:

The dedicated Unit shall be parked under the Infrastructure Planning Department (JPIF) and will subsequently be tasked to set up specific working groups consisting of stakeholders from the public and private sector. These working groups will lead the implementation of the initiatives under this Master Plan.



Roles and Committee Members

The roles and committee members of KL Bike-Ped and Bike Ped Working Group are shown below.

KL BIKE-PED UNIT	BIKE-PED WORKING GROUPS
ROLES • Manage and coordinate the implementation of masterplan • Monitor and review the masterplan	**ROLES** • Supporting the implementation of masterplan • Lead community driven actions proposed in masterplan
PERSONNEL • Existing DBKL's staff or new In-take	**MEMBERS** • Other public agencies andcycling NGOs

Examples of Public Agencies

- APAD
- JKR
- MOH
- PDRM
- PKB
- PLAN Malaysia
- MOE
- MOT
- MIMOS
- MIROS
- etc

Examples of Private Sector/NGOs

- Think City
- Prasarana
- KL Cycling
- Bike Kitchen
- Bike With Elena
- The Basikal
- Community Associations
- KRTs
- Corporate sector

STRATEGY P1-2:
Improving Existing Pedestrian And Cycling Infrastructure

DESCRIPTION:
To ensure 'buy in' from users the first and vital step is to make walking and cycling to be seen as being safe and comfortable. In this light physical improvements to pedestrian sidewalks and cycling trails are essential to assure users that the needs of pedestrians and cyclists are no longer neglected but are being given priority over other road users.

No	Action	Implementing Agency
Action 1	To identify and implement physical retrofitting to improve the safety and comfort of existing pedestrian sidewalks and cycling lanes	• DBKL (L)
Action 2	To improve the effectiveness of the painted bicycle lane programme including its possible expansion within the CBD and residential zones	• DBKL (L) • JKR • Cycling NGOs
Action 3	To provide new pedestrian sidewalks and elevated walkways within high intensity walking areas	• DBKL (L) • Private Sectors
Action 4	To leverage on the Improvement Service Fund (ISF) to partially fund the future provision of pedestrian sidewalks and cycling lanes	• DBKL (L) • PLAN Malaysia • Developers
Action 5	To enhance the first mile and last mile facilities and infrastructure along the KL primary public transportation corridor	• DBKL (L) • Prasarana

STRATEGY P1-3:
Ensuring safety for all segments of pedestrians through proper sidewalk design, planning, construction and maintenance

DESCRIPTION:
Prior to transforming the mindset and behavior of KL city dwellers and commuters, it is essential that the safety of pedestrians on sidewalks is not compromised through poor design or maintenance. This will convince users that walking along the dedicated sidewalks is safe in terms of protecting them from motorised vehicles at junctions as well as from slippery conditions on rainy days. To this end, guidelines for the construction of sidewalks need to be strictly adhered to so as to comply to the highest level of safety standards in terms of design, construction and maintenance.

No	Action	Implementing Agency
Action 1	To enhance the maintenance of pedestrian sidewalks and cycling paths including amenities for persons with disabilities (PWDs)	• DBKL (L) • MIROS
Action 2	To prioritise the rights and safety of pedestrians at critical crossings through physical measures.	• MIROS (L) • DBKL • PDRM
Action 3	To provide effective traffic calming measures in the vicinity of crossings in the residential zones to reduce vehicle speed to below 30km/hr	• DBKL (L) • MIROS • PDRM
Action 4	To intensify enforcement against illegal parking in the vicinity of entrances to schools that create risks to school children who walk and cycle	• DBKL (L) • PDRM
Action 5	To incorporate security features of CPTED/safe city design in designing new sidewalks and pedestrian networks	• PLAN Malaysia (L) PDRM • DBKL
Action 6	To adopt a universal design standard that caters for the needs of persons with disabilities (PWDs)	• DBKL (L) • MIROS

DETAILED ACTION 2:

To prioritise the rights and safety of pedestrians at critical crossings through physical measures.

Description:
PDRM and DBKL aim to reduce the number of accident reports at crossings that involve pedestrians and cyclists to zero. To achieve this target, there is a need to initially identify critical accident areas that require redesigning. Subsequently the relevant authorities need to implement the necessary enhancements to improve the safety level at these crossings such as raised walkways, proper signage and signal phasing.

The figure below shows the concept of redesign critical accidents area

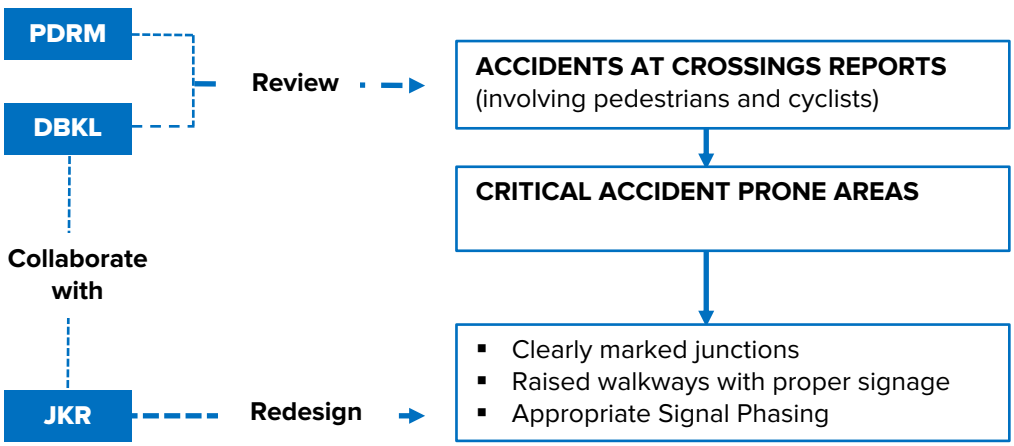
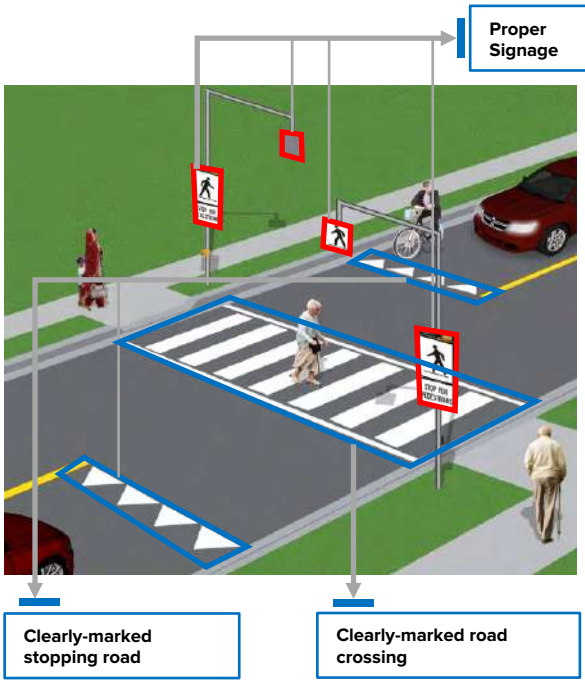


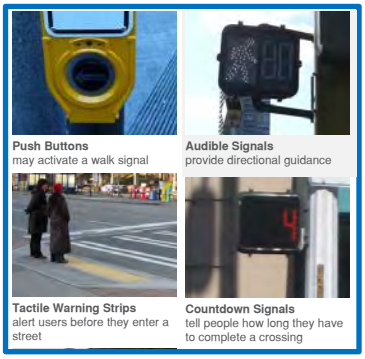
Illustration
The illustration below shows the proposed redesigning of a road crossing.

EXAMPLE OF PROPOSED REDESIGN OF ROAD CROSSING

Between Jalan Tuanku Abdul Rahman and Jalan Dang Wangi

EXAMPLE OF PROPER DESIGN OF ROAD CROSSING





Appurtenance to priotise pedestrians at crossings

DETAILED ACTION 2:

To provide effective traffic calming measures in the vicinity of crossings in the residential zones to reduce vehicle speed to below 30km/hr

Description:

The use of traffic calming techniques such as speed bumps, rumble strips and other road narrowing treatments will contribute to reducing vehicle speeds at residential zones. Some examples of these treatments are illustrated below.

STRATEGY P1-4:
Stepping up the enforcement to protect the rights and safety of pedestrians and cyclists

DESCRIPTION:
In addition to changing the mindset and attitude of urban residents through soft approaches such as public education and incentives, enforcement is key towards the creation of a safe physical environment for pedestrians and cyclists. Policing and enforcement should be stepped up to ensure that the safety of pedestrians and cyclists is not compromised. In addition, strict enforcement against jaywalking is imperative to minimise pedestrian-induced accidents and risks. The presence and visibility of enforcement officers are crucial in assuring users that the authorities are serious in promoting walking and cycling in the city.

No	Action	Implementing Agency
Action 1	To increase enforcement against violations by motorised vehicles along high intensity pedestrian areas	• DBKL (L) • PDRM
Action 2	To enhance the use of CCTVs as a tool for gathering evidence in prosecuting violations against pedestrians and cyclists	• DBKL (L) • PDRM • Building Owners
Action 3	To intensify the use of effective bollards in preventing motorcycles from encroaching into pedestrian sidewalks	• DBKL (L)
Action 4	To step up enforcement against jaywalking especially around busy intersections with the aid of CCTVs	• DBKL (L) • PDRM
Action 5	To leverage on the use of IT as a tool for recording and penalising violations against pedestrians within high intensity walking areas	• DBKL (L) • MIMOS • MDEC
Action 6	To develop a mobile app as part of a Complaint Hotline for pedestrians and cyclists to record and report violations by motorists	• DBKL (L) • MDEC

STRATEGY P1-5:
Alleviating real and perceived crime involving pedestrians through better policing with the use of technology

DESCRIPTION:

In the effort to reduce the fear of crime among users the real situation has to be addressed in an effective manner. This will require better policing by the related agencies through more frequent surveillance especially at critical spots where the crime rate against pedestrians is relatively high. In addition to this the use of technology such as CCTVs should complement physical policing to assure users that the related agencies are on top of the situation as far as protecting the rights of pedestrians. Furthermore better surveillance will help deter and prevent violations against pedestrians. The use of CCTVs shall assist in passive monitoring as well as a means of recording accidents to be used as evidence for prosecutions. It is envisaged that the fear of crime will decrease in line in the reduction in reported crime against pedestrians.

No	Action	Implementing Agency
Action 1	To conduct active monitoring along pedestrian corridors using CCTVs and real time video analytics to complement physical policing	• PDRM (L) • MIMOS
Action 2	To provide better lighting along pedestrian sidewalks and underpasses connected to LRT/MRT stations	• DBKL (L) • PRASARANA • Building owners
Action 3	To develop a crime risk mobile app based on rigorous analytics to be incorporated into the existing SaveMe 999 apps.	• MIMOS (L) • PDRM

STRATEGY P1-6:
Consolidating community programmes on safe and defensive cycling

DESCRIPTION:
Cycling in Kuala Lumpur could be potentially hazardous and a two-pronged approach is required to ensure the safety of cyclists. Besides strict enforcement and public education to mitigate violations against the rights of cyclists, extra attention needs to be given to nurturing a safe and defensive cycling culture. Through working with cycling clubs and NGOs, a systematic programme is required to target urban cyclists on how to minimize the risks of being run over by motorized vehicles through defensive cycling etiquettes and wearing the right (visible) gear etc.

No	Action	Implementing Agency
Action 1	To empower cycling NGOs as 'local champions' for nurturing 'buy in' among residents in the residential zones	• DBKL (L) • Unit LA 21 • KRT • NGOs
Action 2	To support educational programmes for communities on cycling etiquettes and defensive cycling	• JKJR (L) • MOE • NGOs
Action 3	To organise regular community based cycling events within the residential zones that focus on safe cycling	• Cycling NGOs (L) • DBKL • KBS
Action 4	To empower cycling NGOs in conducting regular clinics on safe/defensive cycling for schools and youth groups	• DBKL (L) • Cycling NGOs (L) • KBS
Action 5	To incorporate defensive cycling clinics a regular feature of KL Car Free Morning	• Cycling NGOs (L) • DBKL

DETAILED ACTION 1:

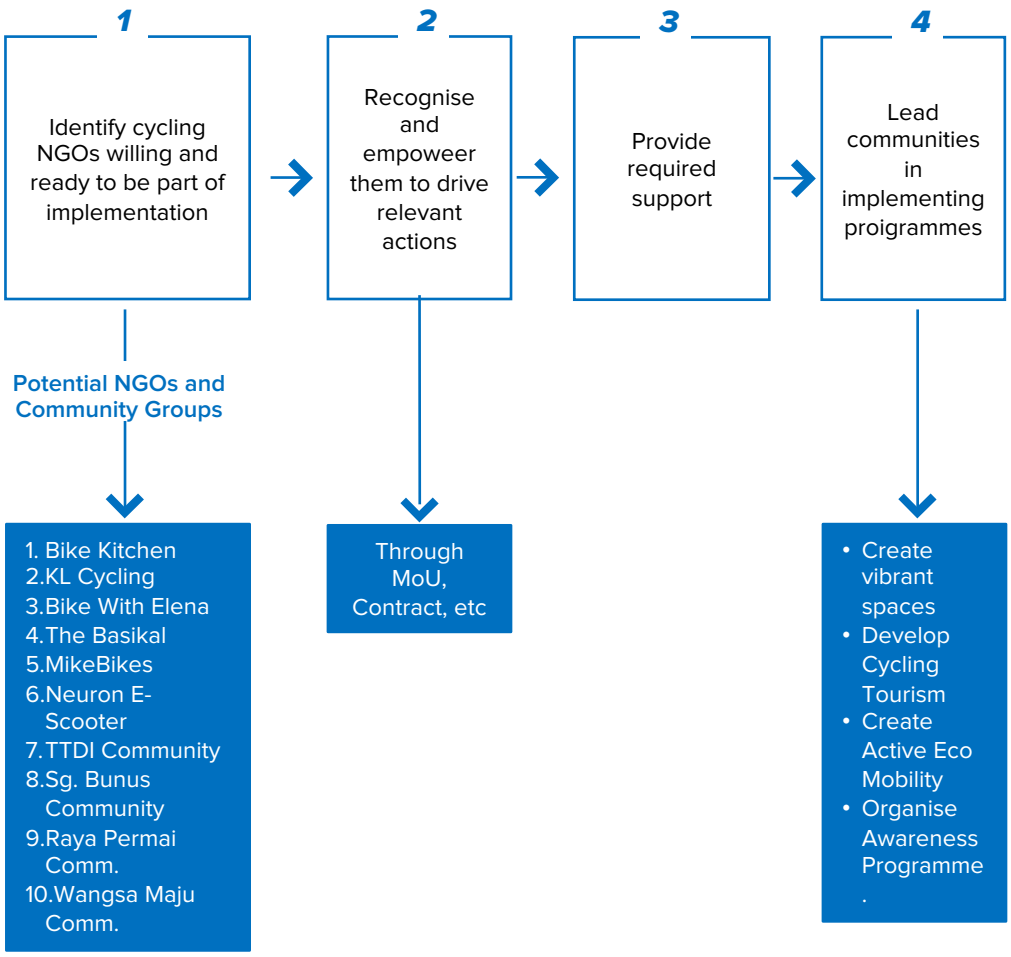
To empower cycling NGOs as 'local champions' for nurturing 'buy in' among residents in the residential zones

Description:

Empowering local cycling champions will help to increase buy-in from among residents in the residential zones of Kuala Lumpur. These NGOs should be recognised and given the mandate to drive the implementation of community cycling improvement actions within their localities.

Engagement Concept:

The following figure shows the process in engaging NGOs and community groups to be part of the Master Plan's implementation:



The following table describes examples of projects that could possibly be driven by the community as well as the role of local champions and the required facilitation

POTENTIAL PROJECT	ROLE OF CHAMPION	FACILITATION
PLACEMAKING: e.g. Partially close Jalan Raja Muda Musa (Kampung Baru)	• Consult and seek consensus from local residents and stall owners • Design alternative circulation route with community • Design street activities and content • Liaise with DBKL and PKB for physical development	• PKB provide venue for community dialog • DBKL advise on technicality and regulations
ECO MOBILITY PROJECT: Kampung Cycling Lane	• Get buy in from local residents • Design concept of linkages, facilities, etc • Liaise with DBKL and PKB for physical development • Monitoring	• DBKL assist on technical support
AWARENESS PROGRAMME: e.g. Cycle to School	• Consult parents • Design the programme and contents • Identify cycling facilities and infrastructure needs along routes to school • Liaise with DBKL and PKB for physical development • Kick off pilot project	• DBKL liaise with PPD/School for approval and documentations

DETAILED ACTION 2:

To support educational programmes for communities on cycling etiquettes and defensive cycling

Description:
Educating local communities on cycling etiquette and on defensive cycling techniques will go a long way in increasing their level of confidence and reduce the fear of cycling on the roads in Kuala Lumpur. These can be communicated through workshops, distribution of handbooks, and the development of mobile apps for KL cyclists.

WORKSHOPS	HANDBOOKS	MOBILE APPS
• Organise scheduled cycling workshops aimed at target groups to enhance their cycling knowledge, share experiences, etc	• Distribution of cycling etiquette handbooks containing appropriate cyclist behaviour, dos & don'ts, etc.	• Information about cycling in terms of technologies used, benefits, etc. • Platform to report relevant issues, safety reminder, etc.







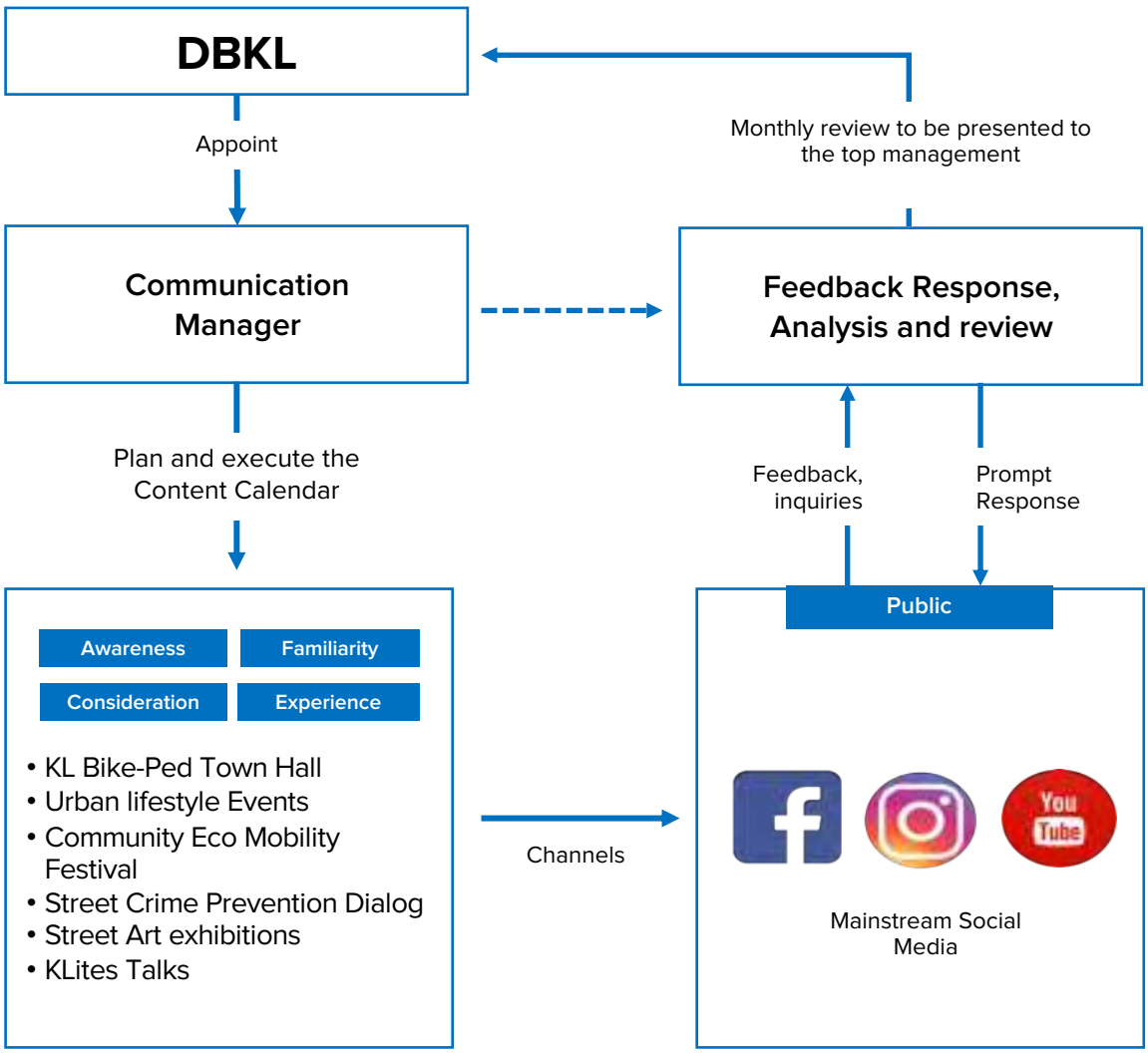

STRATEGY P1-7:
Designing and piloting A five-year communications plan to champion walking and cycling

DESCRIPTION:
The highly successful transformation of mindset achieved by Asian cities like Hong Kong, Tokyo and Singapore in getting their residents and commuters to significantly walk and cycle more had been achieved through the use of both ;carrot and stick' approaches. Central to these approaches is having a good communications plan that is backed by effective execution. As urban residents become increasingly sophisticated and discerning, having a proper platform for disseminating information and receiving feedback is crucial hence the need for a 5 year communications plan. This could be done in house or by outsourcing this highly specialized task, as long as the communications process is carried out in a professional and innovative manner.

No	Action	Implementing Agency
Action 1	To launch a preliminary publicity blitz on DBKL's commitment to encourage walking and cycling as part of its livable city agenda	• DBKL's Corporate Unit (L)
Action 2	To embark on a 3-month trial run before refining the communications plan in terms of content, presentation and communication channels	• DBKL's Corporate Unit (L)
Action 3	To inspire the public by appointing brand ambassadors and role models to give motivational talks at dedicated events	• DBKL (L) • KBS • Cycling NGOs
Action 4	To use campaigns, events and social media user-generated content that promote feel good testimonies	• DBKL's Corporate Unit (L)

Conceptual of Piloting A Five-year Communications Plan

Description:
Fully embrace social media by appointing a Communication Management Manager to plan and execute the Content Calendar. The Communication Management Management shall post related updates using Facebook, Youtube and Instagram of between one to two activities per month. There should be a clear channel and platform for eliciting prompt feedback from the public and a monthly review should be presented to the top management.



DETAILED ACTION 1:

To launch a preliminary publicity blitz on DBKL's commitment to encourage walking and cycling as part of its liveable city agenda

Description:
Preliminary publicity of DBKL's aspiration will be carried out to support the physical quick-win projects. The publicity activities involve the design, printing and distribution of at least 200,000 pamphlets to the public. The contents of the pamphlets shall consist of DBKL's initiatives for walking and cycling, the painted bicycle lanes project, and dos and don'ts related to walking and cycling lanes and areas.

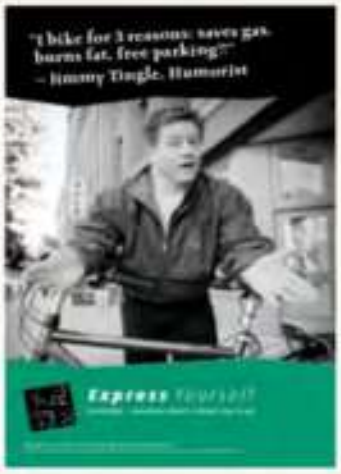
Illustration: The content of the pamphlets.

BOX 1:

EXAMPLE OF CYCLING AND PEDESTRIAN EMOTIONAL CAMPAIGN IN CAMBRIDGE

Cambridge, MA's "Express Yourself" campaign

"Approach: Use an emotional (versus rational) approach to selling alternative transportation. Make walking, biking, and public transportation appear fun and hip, while recognizing that never driving is not realistic."



DESCRIPTION

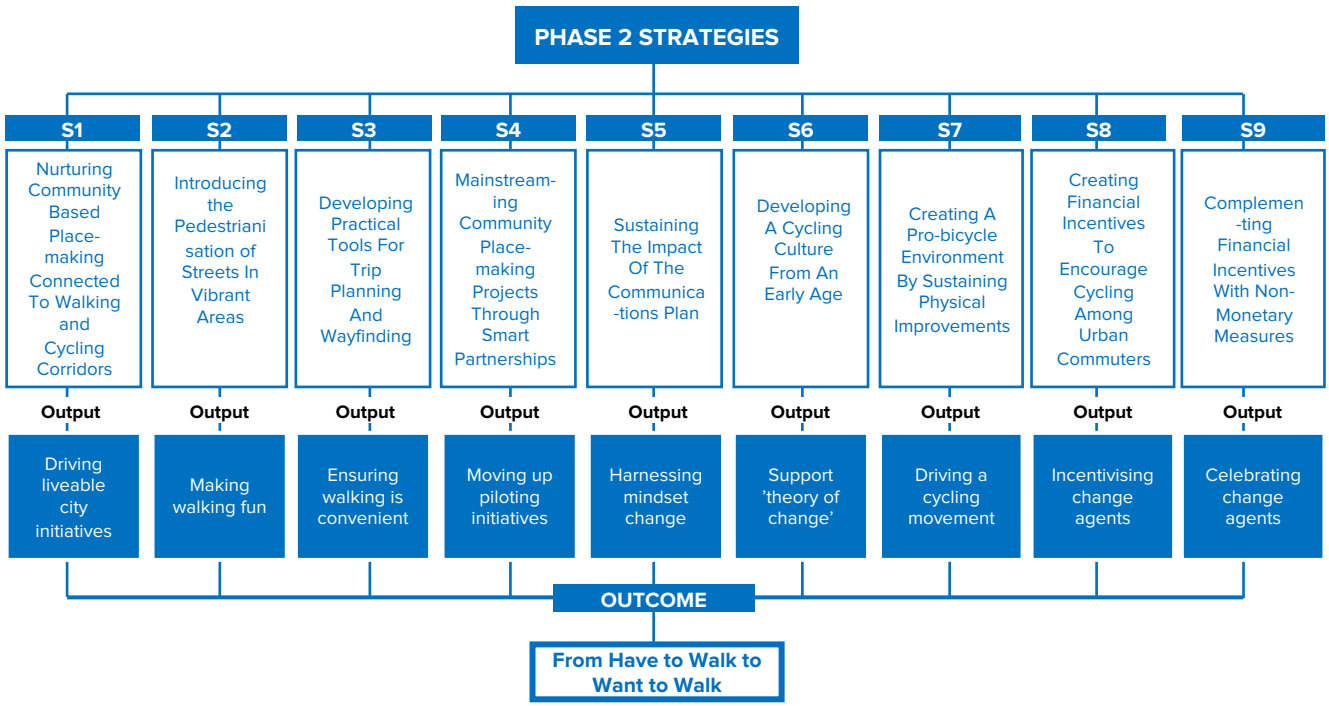
- Create a unique emotional campaign that depends on fear are often the most effective than just giving information
- Cycling in the U.S already has a strong association with fear, which discourage more people from riding bikes. Safety campaigns that personalize and humanize cyclists are ideal.
- Example of an emotional safety message campaign: **"Be Careful; the cyclist could be someone you know."**
- Using billboards and road sign posters will give a clear message that the cityis promoting walking and cycling as an alternative mode.

Phase 2:
From Having To Walk To Wanting To Walk

In Phase 2, 'buy in' needs to be sustained so as to build on the initial momentum created as well as to nurture the incremental change in mindset and travel behaviour. Towards this end efforts in community driven placemaking need to be intensified in relation to walking and cycling, in which the River of Life project shall act as a driver for the change in mindset - from having to walk to wanting to walk. For the mind-set change to occur, the motivation for walking and cycling needs to be transformed from cost saving/convenience to enjoyable/exhilarating /healthy. Community driven place making should radiate from the River of Life project to form a spine within appropriate pockets in the residential zones. A participatory approach should be used to guide the process of community driven place making by involving government agencies, the corporate sector, NGOs and civil society. Successful community initiatives should be celebrated as role models for replication.

Schematic Diagram of Recommendation In Phase 2

The following schematic diagram links the strategies in Phase 2 with the expected output of each strategy and the overall outcome. Detailed of each strategy are described in the following section.



STRATEGY P2-1:
Nurturing Community Based Placemaking Connected To Walking And Cycling Corridors

DESCRIPTION:
Projects such as the River of Life can only be successful if it is supported by community placemaking to create attractive, vibrant and safe public spaces that portray the heart and soul of the community. In the CBD the use of street murals, public art and creative street furniture will be able to enhance physically the overall ambiance of certain sections of the CBD but community driven placemaking needs to complement physical improvements which is challenged by the fact that a sense of community has yet to emerge. Currently areas such as Medan Pasar is dominated by the immigrant community while the other communities are aspatial in nature (residing in the residential zones). Therefore community projects need to be introduced and sustained, and a systematic approach such as the EcoMobility project developed by a local NGO (CETDEM) in Taman Jaya, Petaling Jaya could be replicated in terms of its methodology.

No	Action	Implementing Agency
Action 1	To leverage on the River of Life Project as the hub for a spine of walking and cycling corridors in Kuala Lumpur CBD	• DBKL (L) • Cycling NGO • KRT
Action 2	To provide space and support for activities and events organised by community groups, social enterprises and independent artisans	• DBKL (L) • Think City • KRT
Action 3	To include performances by immigrant communities living in the CBD during mainstream cultural events and festivals	• DBKL (L) • Embassy Office • Think City
Action 4	To introduce the partial closure of vibrant streets during weekends/public holidays to celebrate and showcase street-based activities	• DBKL (L) • Community Association
Action 5	To provide financial support for community projects that connect public spaces with safe and comfortable pedestrian and cycling corridors	• GLC • Corporate Sectors • DBKL
Action 6	To improve and maintain the quality of street furniture along pedestrian corridors such as benches, pergolas, public art and street murals	• DBKL (L)
Action 7	To conduct active monitoring along walking/cycling corridors using CCTVs to complement physical policing	• DBKL (L) • PDRM • Unit Bandar Selamat (PLAN Malaysia)

DETAILED ACTION 2:

To provide space and support for activities and events organised by community groups, social enterprises and independent artisans

Description:

Medan Pasar has been physically transformed by urban renewal projects and programmes mainly initiated by the River of Life project and Think City. However the enclave is dominated by migrant communities and there is a disconnect that could be addressed by integrating through their active participation in mainstream cultural activities and events. Medan Pasar should be transformed into a vibrant and lively space in the city centre driven by NGOs and involving the local community groups. Activities such as art performances (music, instrumentals, buskers, art painting) and craft fairs will support and provide interesting activities for passers-by and tourists.

Photo Credit: 9M Studio

Morning Event	Evening Event	Night Event
		
• Craft and SME mini festivals • Food festival	• Street soccer • Extreme game	• Battle of the band (busking competition) • Magic art • Pantomime

DETAILED ACTION 4:

To introduce the partial closure of vibrant streets during weekends/public holidays to celebrate and showcase street-based activities

Description:

The temporarily closing off vibrant streets could be used to test the acceptance of the pedestrianisation among the key stakeholders in the area. The following streets have been identified for partial closure during weekends and public holidays:

1. Jalan Bukit Bintang
2. Brickfield (part of Jln. Tun Sambatan)
3. Jalan Telawi 3, Bangsar Village
4. Jalan TAR (Tunku Abdul Rahman)
5. Jalan Raja Muda Musa (Kg. Baru)

1. Jalan Bukit Bintang

Photo Credit: @ Victor Maschek

2. Brickfield (part of Jln. Tun Sambatan)

Photo Credit: Astro Ulagam

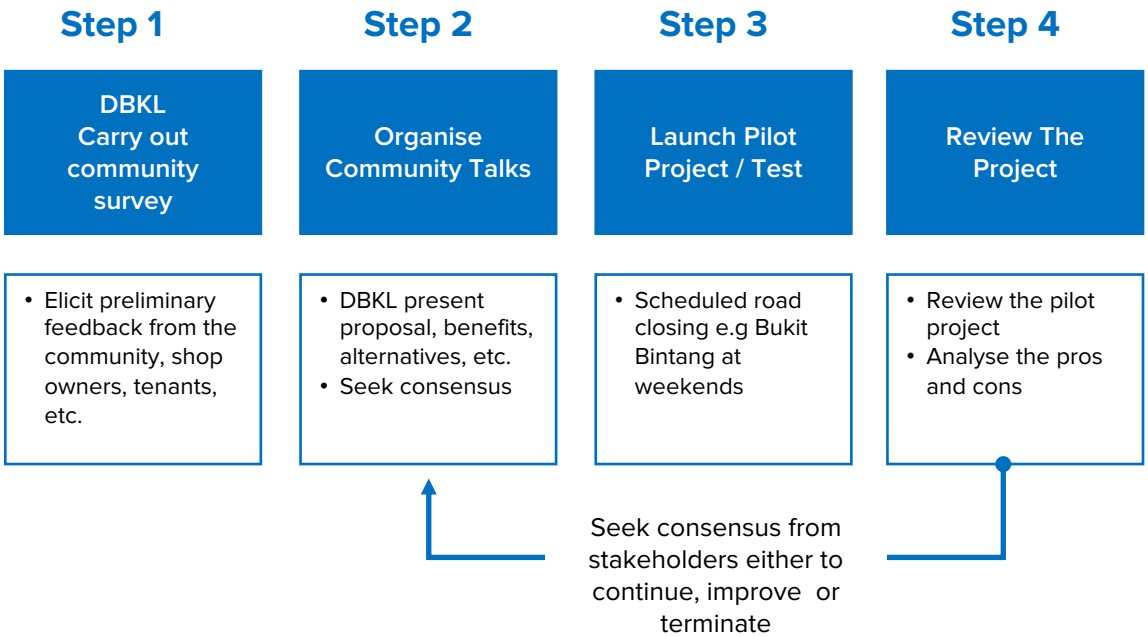
3. Jln. Telawi 3, Bangsar Village

4. Jln. Tunku Abdul Rahman

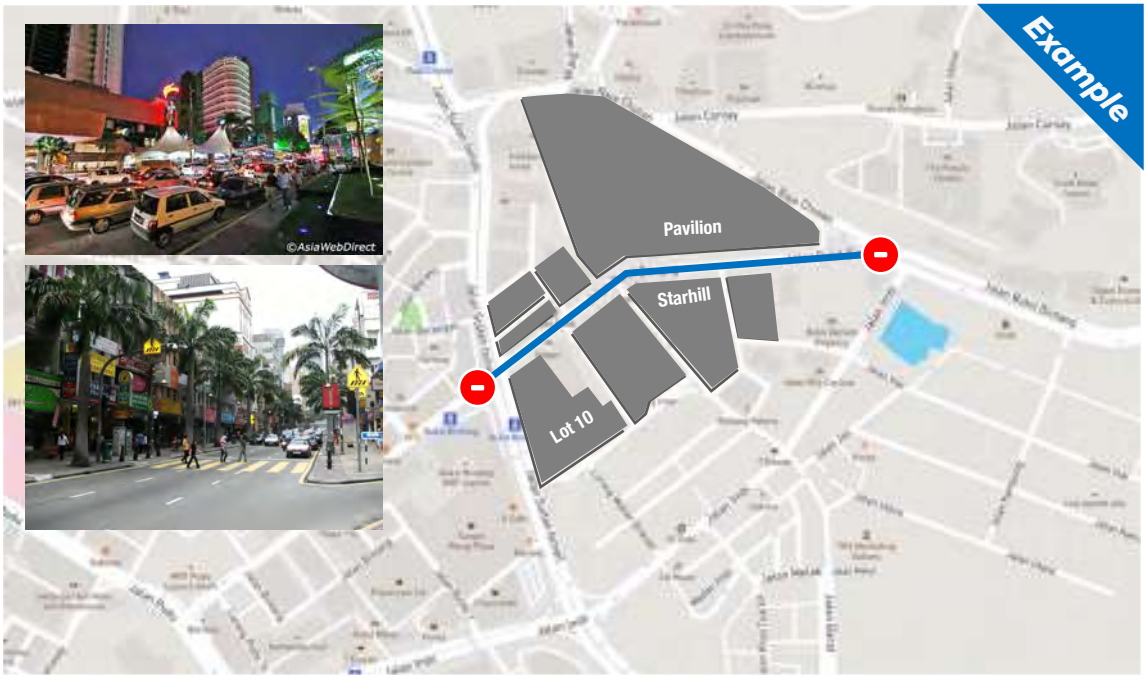
5. Jln. Raja Muda Musa (Kg. Baru)

Development Concept;
Vibrant streets, such as Jalan Bukit Bintang, will be partially pedestrianised on weekends through road closures. Traffic diversion will be required to direct traffic to go around the streets towards their destination. The purpose of this recommendation is to make the streets more vibrant and allow the general public to experience walking and cycling in Kuala Lumpur.

Public Engagement Process;
Before any road closures are carried out, rigorous engagement with the public and communities should be held first in order to communicate the benefits and seek their consensus for a pilot test. Once the community has given their approval, then scheduled road closing should be carried out for a short period to test its impact on the business and traffic within the area. After the testing period is complete, the project should be reviewed by the community and DBKL before the decision to carry on or terminate the road close is made.



EXAMPLE: PROPOSED PARTIALLY PEDESTRIANISATION OF JALAN BUKIT BINTANG



	ROAD LISTS
Alternative Traffic Diversion	• Jalan Imbi • Jalan Pudu • Jalan Raja Chulan
Connection Via Other Roads	• Jalan Berangan • Jalan Nagasari • Jalan Changkat Bukit Bintang • Jalan Bulan 1

Day for road closure : Weekend

BOX 2:

BENCHMARKING – ORCHARD ROAD, SINGAPORE

DESCRIPTION

- This initiative aims to inject street vibrancy into the precinct by creating a community space and an accessible lifestyle experiences for all to enjoy.

DETAILED ACTION 5:

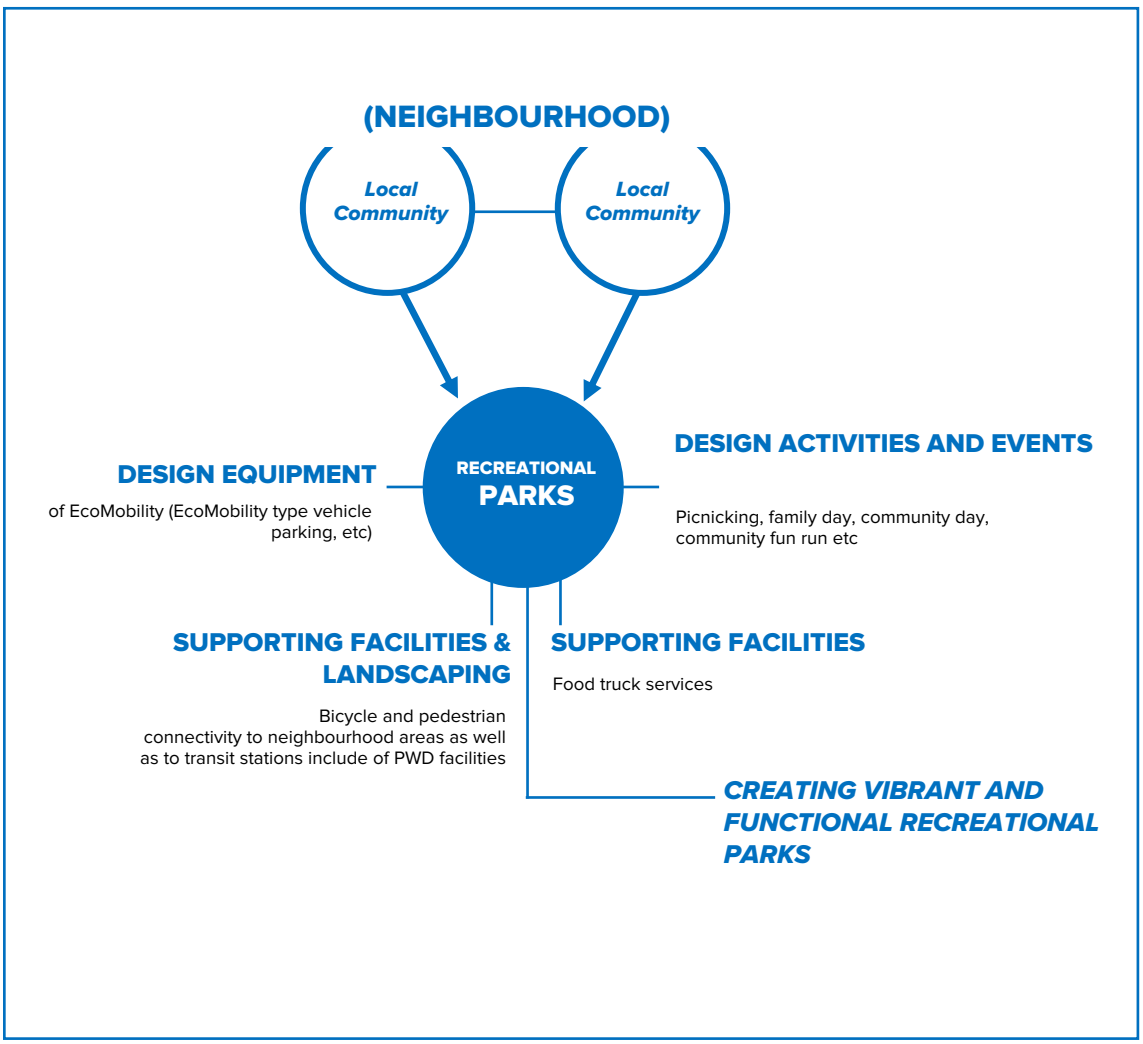
To provide financial support for community projects that connect public spaces with safe and comfortable pedestrian and cycling corridors

Description:

Smart Mobility programmes are proposed to help guide and hand-hold local communities. Through the Smart Mobility Programme, communities can redesign recreational parks in their respective neighbourhoods in terms of activities, equipment, facilities and events. The redesign will be based on the needs and preferences of the community through a series of workshops, surveys and forums.

Development Concept

This programme transforms pocket parks and riverbanks into vibrant and functional recreational public areas for communities to enjoy. The figure below shows the concept of Smart Mobility programmes.



BOX 3:

BEST PRACTICE OF PJ MOBILITY PROJECT

- Empowers communities around Taman Jaya, PJ to embark on Eco Mobility Project
- Initiated by Center for Environment, Technologies & Development Malaysia (CETDEM)
- An 16-month Awareness and Action Project co-funded by UNDP/GEF SGP and facilitated by MPPJ
- Guiding and hand holding community to re-design content of Taman Jaya Recreational Park (equipment, activities, facilities, infrastructures)
- Connection to 3 surrounding neighborhoods

Proposed Implementation Approach To Develop Eco Mobility Projects In Kuala Lumpur By Exemplify CETDEM Model

Diagram below shows the Methodology used by CETDEM in PJ EcoMobility Project at Taman Jaya

STEP 1	STEP 2	STEP 3
Preliminary consensus and cooperation	**Baseline Data Collection and Awareness**	**Redesign Eco Mobility Recreational Park**
• Project meetings and briefings by DBKL with other stakeholders (e.g CETDEM) and KRT • Recruitment of the project staff among KRT representatives (local champion)	• Carried out series of park users and residents survey to gauge the utilisation of the recreational park and the understanding of EcoMobility. • Organise series of Community talks, forums and workshops.	• CETDEM work with DBKL and KRT to redesign the current recreational part to incorporate EcoMobility features • Develop EcoMobility features

STEP 4	STEP 5	Proposed Pilot Project in Kuala Lumpur
Evaluating Equipment For Park	**Follow up Survey and Refinement**	
• CETDEM work with DBKL and KRT evaluate various EcoMobility equipment • Installing equipment in the park	• DBKL and KRT will carry out another series of surveys to assess any changes in the utilisation of the EcoMoblity Recreational Park and any improvement in the understanding of EcoMobility.	• KRT Sungai Bunus • Kg. Kolam Air • Kg. Baru

DETAILED ACTION 6:

To improve and maintain the quality of street furniture along pedestrian corridors such as benches, pergolas, public art and street murals

Description:
Exemplifying the successful of the street rejuvenation projects at Bukit Bintang to other places in Kuala Lumpur such as Petaling Street, Jalan TAR, Brickfield, Bangsar Village etc.

BOX 4:

BEST PRACTICE OF PLACEMAKING INITIATIVES IN BUKIT BINTANG, KUALA LUMPUR

Description

The transformation project was first initiated in 2015 and 20 areas in downtown Kuala Lumpur were identified, namely within Bukit Bintang, Jalan Alor and the Tun Razak Exchange (TRX).

Jalan Alor's surroundings was identified for potential regeneration and work is completed. It covers Jalan Tong Shin, Tengkat Tong Shin, Changkat Bukit Bintang, Jalan Berangan and Jalan Alor.

The project has brought about the multiplier effect on the local economy, society and physical environment.

Economic Impact	Social Impact	Physical Impact
• Increase of land value • The conversion of land use from residential to commercial and businesses • The vacant lots had been occupied and currently under renovation for businesses • Tourists attraction • More people coming more income generated	• Sense of belonging of the space and place • The laneways has been taken care by the community • Community lead responsibility • Good cooperation between community and DBKL	• Laneways become clean • Laneways more safer with lights and activities • Become a gathering place • No more open space available and the laneways has been utilise as new public space

BOX 4: (Cont.)

BEST PRACTICE OF PLACEMAKING INITIATIVES IN BUKIT BINTANG, KUALA LUMPUR

PROJECT LOCATION

7 LANEWAYS PROJECTS
1 POCKET PARK IN ALOR ENCALVE

The Theme

1. ***Alor*** **- Completed**
2. ***Komuniti di Alor*** **- Completed**
3. ***Laman Belakang*** **- Completed**
4. *Taman Rembia* – Design stage
5. ***Alam Alor*** **– Under construction**
6. *Budaya Alor* - Design stage
7. *Pesta makanan* - Design stage
8. *Kehidupan Alor* - Design stage

STRATEGY P2-2:
Introducing Pedestrianisation Of Streets With Heavy Pedestrian Traffic In Vibrant Areas

DESCRIPTION:
Full or partial pedestrianization of streets that are vibrant with colour and road side activities is deemed appropriate to facilitate placemaking. This will encourage walking and cycling as part of the gradual mindset and behavioral change. However rigorous public consultation is crucial to elicit feedback from key stakeholders especially as regards to parking, loading and unloading issues.

No	Action	Implementing Agency
Action 1	To embark on a continuous public consultation programme on future pedestrianisation along vibrant and high intensity walking areas	• DBKL (L) • Communities
Action 2	To complement pedestrianisation through wayfinding using conventional medium such as physical signage and/or through mobile apps	• DBKL (L) • IT Vendors

STRATEGY P2-3:
Developing Practical Tools For Trip Planning And Wayfinding

DESCRIPTION:
This strategy aims to develop practical tools for trip planning and wayfinding using mobile apps that are available on all platforms for free. The apps will offer information related to navigating Kuala Lumpur on foot or bicycle. An intelligent wayfinding system will be used to find the safest, shortest, and most interesting routes towards a particular destination. The wayfinding system will enable pedestrians to find shortcuts through publicly-accessible buildings and pedestrian-only paths, unlike current systems that only use vehicle roadways.

No	Action	Implementing Agency
Action 1	To design mobile apps for trip planning that offer information on walking and cycling within the CBD and to and from the residential zones	• DBKL (L) • IT Vendors
Action 2	To incorporate wayfinding elements in the mobile apps for the use of local residents, commuters and tourists	• DBKL (L) • IT Vendors

DETAILED ACTION 1:

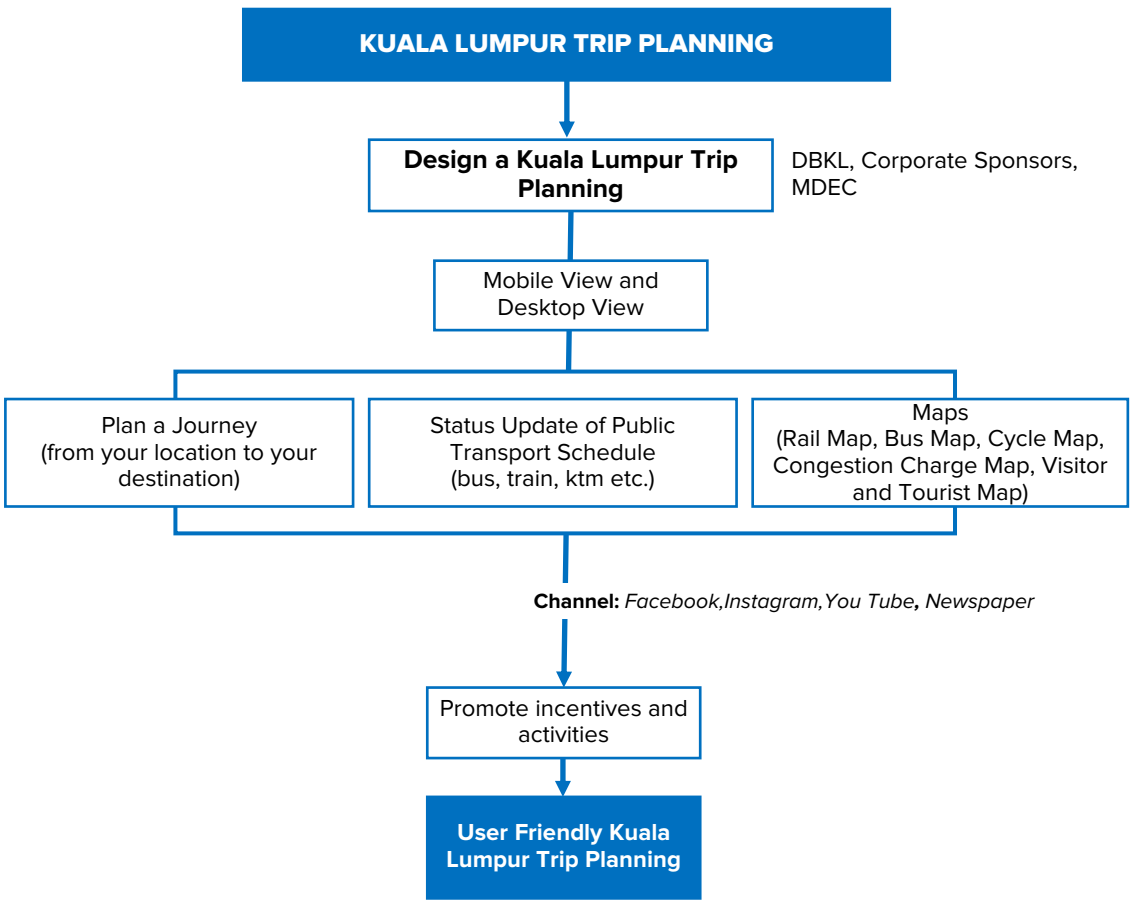
To design mobile apps for trip planning that offer information on walking and cycling within the CBD and to and from the residential zones

Description:

Kuala Lumpur Trip Planning will be a user-friendly mobile app that offers information on walking and cycling that will also be integrated with public transportation (bus and transit) routes and schedules. Additional information, such as real-time/forecasting whether, public transport status, maps, etc. will also be accessible from the app. In additional, it is also suggested to promote reward system and vouchers as incentives in conjunction with this trip planning apps. KL Trip Planning users could also leverage the use of QR code system which provided by the operators.

Development Concept

The figure below shows the concept of Kuala Lumpur Trip Planning



The illustration below shows the KL Trip Planning.

KL TRIP PLANNING

Proposed Main Contents of Apps

1 PLAN A JOURNEY

- Choose Their Destination (From – To)
- Choose Their Time And Date (Leaving - Arriving)
- Choose Travel Preference (By Public Transport / Cycling / Walking)
- My Journey: Plan A Journey And Add To Favorites For Quick Access In The Future
- Show Recent Journeys

2 WEATHER / TEMPERATURE

- Real-time
- Forecasting

3 STATUS UPDATES

- Choose Public Transport types
- Choose Time (Now, Weekend, Future date)
- Choose Location (lines / stations / bus stop / routes / place)

4 MAPS

- LRT Maps
- KTM Maps
- Monorail Maps
- Bus Maps
- KL Cycle Maps
- Visitor and Tourist Map

5 PUBLIC TRANSPORT

- Choose Public Transport
- Show Different Types Of Routes
- Choose Access Options
- Choose Preferences

6 CHOOSE YOUR TRIP

- Leisure Trip
- Business Trip
- Personal Errand
- Family Trip

7 MY TRAVEL SCHEDULE

- Planned Works Calendar
- Major Works And Events

8 FACILITIES

- Grab
- MyCar
- Taxi
- Car Rental

STRATEGY P2-4:
Mainstreaming Community Placemaking Projects Through Smart Partnerships

DESCRIPTION:
The success of the DBKL placemaking project in Bukit Bintang should be replicated in the other parts of the CBD and the residential areas as part of the mainstream physical planning of the city. Towards this end the One Project Per Community initiative should be the main driver for mainstreaming by creating partnerships, programmes and sustainable financing.

No	Action	Implementing Agency
Action 1	To replicate the success of the DBKL placemaking project in Bukit Bintang at appropriate locations starting with TTDI as a pilot project	• DBKL (L) • Think City • Local Community
Action 2	To launch the One Project Per Community as a flagship community placemaking project that champions walking and cycling	• DBKL (L) • Think City • Local Community • Cycling Associations

DETAILED ACTION 1:

To replicate the success of the DBKL placemaking project in Bukit Bintang at appropriate locations starting with TTDI as a pilot project

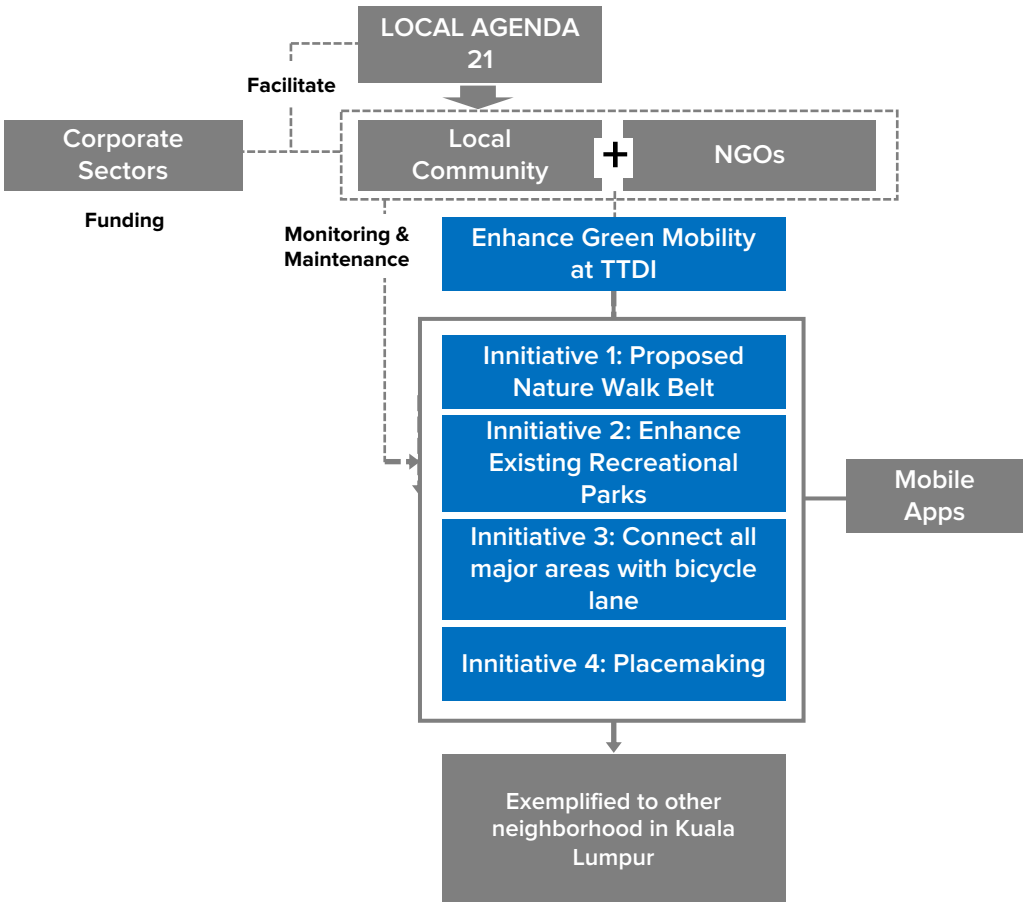
Description:

Build on the commitment and passion of the local community in TTDI to improve their neighbourhood environment through placemaking initiatives and promote pleasant walking and cycling activities. This will be carried out by adopting the placemaking model in Bukit Bintang, which has successfully transformed the area for public use through collaborative management between DBKL and the local community in design and implementation.

TTDI COMMUNITY REJUVENATION PROJECT

PROJECT DISCRIPTION AND PROFILE

Development Model:
DBKL need to play a major roles in preparing the local community to drive place-making initiatives by leveraging on successful LA 21 programme. Collaborative management through partnership with NGOs and corporate sectors need be formed to ensure sustainable development. The figure below describes the development model for community project in TTDI.



OTHER POTENTIAL NEIBOURHOODS

- Taman Dato' Senu
- Taman Batu Permai
- Taman Wahyu
- Taman Jaya
- Taman Midah
- Desa Setapak
- Taman Sri Rampai
- Bukit Bangsar
- Kg. Pandan
- Bandar Sri Permaisuri

Development Concept:
The following figures shows the proposed TTDI community rejuvenation project.

i) TTDI Land Uses
The figure below shows the existing land uses in TTDI






ii) Proposed Development

Proposed four main physical developments related to enhance green mobility in TTDI

PROJECT 1:
proposed nature walk belt

Adaptive reuse of existing drainage across TTDI neighborhood

PROJECT 2:
enhance existing recreational parks

Enhance existing recreational parks in TTDI with healthy community activities and events

PROJECT 3:
connect all major areas with bicycle lane

Linking all major areas in TTDI through development of dedicated bicycle lanes

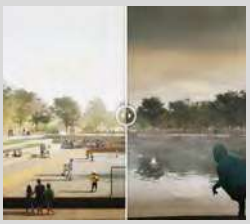
PROJECT 4:
Art on street

Beautification of commercial areas in TTDI with mural, back lane rejuvenation, etc

iii) Detailed Development

Figures below shows detailed of each proposed projects in TTDI

Component 1	Component 2	Component 3
Reuse vacant space along drainage as a 'Nature Walk Belt' • Redesign the space along drainage (1.46KM) • Walkways • Bicycle Lane • Pocket Parks	Beautification of the area • Element of landscaping • Creative walkways and stairs design	Proposed sustainable approaches • Dual function of space • Pave-Gen • Solar Energy



iii) Detailed Development (Cont.)

Component 1	Component 2	Component 3	Component 4
Enhance the existing recreational park • Improve the existing facilities	**Improve community inter-access to park** • Connectivity for community surrounding the park (Improve walkway, provide bicycle lane)	**Encourage community to create events** • Programmes and events (every month)	**Proposed identity for each park** • Landmarks • Attractive design • Attractive activities
			

iii) Detailed Development (Cont.)

Component 1	Component 2	Component 3	Component 4
Proposed bicycle lane with complete facilities (7 KM) • Jalan Dato Sulaiman • Jalan Dato Sulaiman 2 • Jalan Abang Haji Openg • Jalan Leong Yew Koh • Jalan Burhanuddin Helmi • Jalan Athinahapan	Proposed safety and comfort elements connecting school to train station (1.83 KM) • Jalan Burhanuddin Helmi & Jalan Leong Yew Koh • Shaded walkway • Separate lanes • Lighting	Proposed smart traffic lights system • 5 Locations (main junctions) at Jalan Dato Sulaiman, • Jalan Burhanuddin Helmi & Jalan Leong Yew Koh	Proposed bike parking and biking fixtures • 5 locations (2 Schools, 2 Commercial Areas, Train Station, Parks)
			

iii) Detailed Development (Cont.)

Location 1	Location 2	Location 3	Location 4
Reuse vacant spaces into pocket parks	Back lane beautification	Convert to full pedestrianisation	Existing pedestrian beautification
			

DETAILED ACTION 2:

To launch the One Project Per Community as a flagship community placemaking project that champions walking and cycling

Description:
The One Project Per Community initiative will be the primary thrust in getting more residents in KL to walk and cycle. This initiative is a bottom-up approach that empowers local communities to decide what improvements they want to see in their neighbourhoods and to take charge and drive the implementation of these changes. The following are some of the potential projects that can be driven by the community.

POTENTIAL PROJECTS TO BE DRIVEN BY COMMUNITY

1

PLACEMAKING

- Adaptive building / space reuse
- River revitalising
- Pedestrianisation

2

CYCLING TOURISM

- Town trail
- Heritage trail
- Food trail

3

ACTIVE ECO MOBILITY

- Community parks
- Neighbourhood cycling lane
- Eco mobility programme / events

4

AWARENESS PROGRAMME

- Safety and security
- Health and benefit Campaign
- Agent for DBKL Communication Plan

STRATEGY P2-5:
Sustaining The Impact Of The Communications Plan

DESCRIPTION:
Having initiated the communications plan, sustaining its impact is imperative by focusing on a Wow campaign. Social media will provide the ideal platform for the campaign messages to resonate with the different user segments. Additionally innovative competitions and testimonials from participants are powerful medium of communications to sustain the impact and 'buy in'.

No	Action	Implementing Agency
Action 1	To launch the intermediate phase of the communications plan by focusing on a Wow campaign heavily supported by social media	• DBKL (L) • Brand Communication Consultant
Action 2	To intensify walking and cycling competitions such as the Spartan Race, Viper Challenge and RIUH, etc.	• Cycling NGOs (L) • Event Management Company • KBS • DBKL
Action 3	To partner traditional and social media for content seeding based on testimonials from participants	• DBKL (L) • Brand Communication Consultant

STRATEGY P2-6:
Developing A Cycling Culture From An Early Age

DESCRIPTION:

A cycling culture has to be be developed from an early age involving school children. An innovative Bike for Life programme could be introduced to provide an easy payment and trade in scheme for every urban household to own at least one bicycle. A cycling culture needs to be nurtured within the residential zones that should also incorporate the use of micromobility vehicles.

No	Action	Implementing Agency
Action 1	To partner bicycle shops in offering easy payment and trade in schemes in a Bike For Life programme	• Cycling NGOs (L) • Shop Owners
Action 2	To organise and pilot exciting cycling events for school children that focus on safety and a healthy lifestyle	• MOE (L) • DBKL • Cycling NGOs
Action 3	To appoint national sportsmen/sportswomen as brand ambassadors in monthly Wow campaigns on social and mass media	• KBS (L) • DBKL • Cycling NGOs

STRATEGY P2-7:
Creating A Pro-bicycle Environment By Sustaining Physical Improvements

DESCRIPTION:
In the second phase of the Master Plan the focus should be given to expanding physical improvements to further support cycling to work and as a recreational activity. Given the growing popularity of micromobility vehicles such as e-scooters the physical improvements should not be confined to the needs of conventional cycling. In tandem with the need for the growth of micromobility vehicles to be regulated, physical improvements in the future should also cater for their specific needs.

No	Action	Implementing Agency
Action 1	To develop a recreational bicycle lane network encompassing the routes recommended in the Cycling KL bicycle map project	• DBKL (L) • Cycling NGOs
Action 2	To provide bicycle parking racks at all LRT/MRT stations and in the vicinity of major public buildings in Kuala Lumpur CBD	• DBKL (L) • Prasarana
Action 3	To expand the existing painted bicycle lane network connecting with residential zones outside Kuala Lumpur CBD	• DBKL (L) • Cycling NGOs
Action 4	To provide parking racks for micromobility vehicles at all LRT/MRT stations and near major public buildings	• Service providers • Building owners
Action 5	To require new developments to provide pedestrian walkways and cycling lanes for the issuance of planning permission	• DBKL (L) • PLAN Malaysia • Developers

STRATEGY P2-8:
Creating Financial Incentives To Encourage Cycling Among Urban Commuters

DESCRIPTION:
Financial incentives are essential to trigger interest among companies to promote cycling to work among their employees, especially start up companies that promote a contemporary and healthy urban lifestyle. In its formative years, companies should be encouraged to offer modest incentives for their staff which could subsequently be up scaled and harmonised to become best practice or protocol. Although these incentives should be voluntary in nature, close collaboration between the related agencies and the private sector is essential to their sustainability.

No	Action	Implementing Agency
Action 1	To partner and incentivise companies to embark on financial reward schemes for employees who cycle to work.	• DBKL (L) • Private sector
Action 2	To secure pledges from companies to implement an equal rights policy for transport claims for employees who cycle to work	• Depart of Labour (MOHR) (L)
Action 3	To provide a tax refund to private companies that provide commuting allowances to their staff who actively cycle to work	• DBKL (L) • LHDN
Action 4	To encourage employers to provide annual financial incentives for employees to buy and repair bicycles	• DBKL (L) • KBS
Action 5	To promote the use of regulated micromobility vehicles as a first mile/last mile alternative to walking and traditional cycling	• Service providers (L) • DBKL • PRASARANA
Action 6	To include e-scooters and other personal mobility devices into the list of items for tax exemption under the Lifestyle header	• MOF (L) • LHDN

DETAILED ACTION 2:

To include e-scooters and other personal mobility devices into the list of items for tax exemption under the lifestyle header

Description:

Adding the purchase or use of e-scooters and other similar personal mobility devices into the tax exemption list will encourage the public to try out or buy these devices as a mode for first mile, last mile transportation in Kuala Lumpur.

BOX 5:

EXAMPLE OF MONETARY TAX INCENTIVES OFFER BY EMPLOYER FOR CYCLIST WORKER IN U.K

DESCRIPTION

- U.K has been introducing many options of tax incentives for the employee to encourage using bicycle to work.
- These tax incentives has been introduced since 2016.

BOX 6:

EXAMPLE OF TAX BENEFIT CYCLE SCHEME IN UNIVERSITY OF BRISTOL, U.K

DESCRIPTION

- Some universities in U.K offered tax benefit cycle scheme for the students and staff.
- Among the benefit are to obtain bicycle and cycle safety equipment such as helmet, lock or reflective clothing up to a total value of 800pounds.

STRATEGY P2-9:
Complementing Financial Incentives With Non-monetary Measures

DESCRIPTION:
Non-monetary incentives include the provision of facilities such as shower rooms, lockers and CCTVs can be done through partnerships schemes. In the short term, partnerships could formed with at least 5 companies a year to participate in providing cycling and pedestrian facilities in and around their buildings. In addition, DBKL may also amend their development guidelines for free-standing commercial buildings such as shopping malls and office towers to include shower rooms and lockers when applying for planning approval or license renewal.

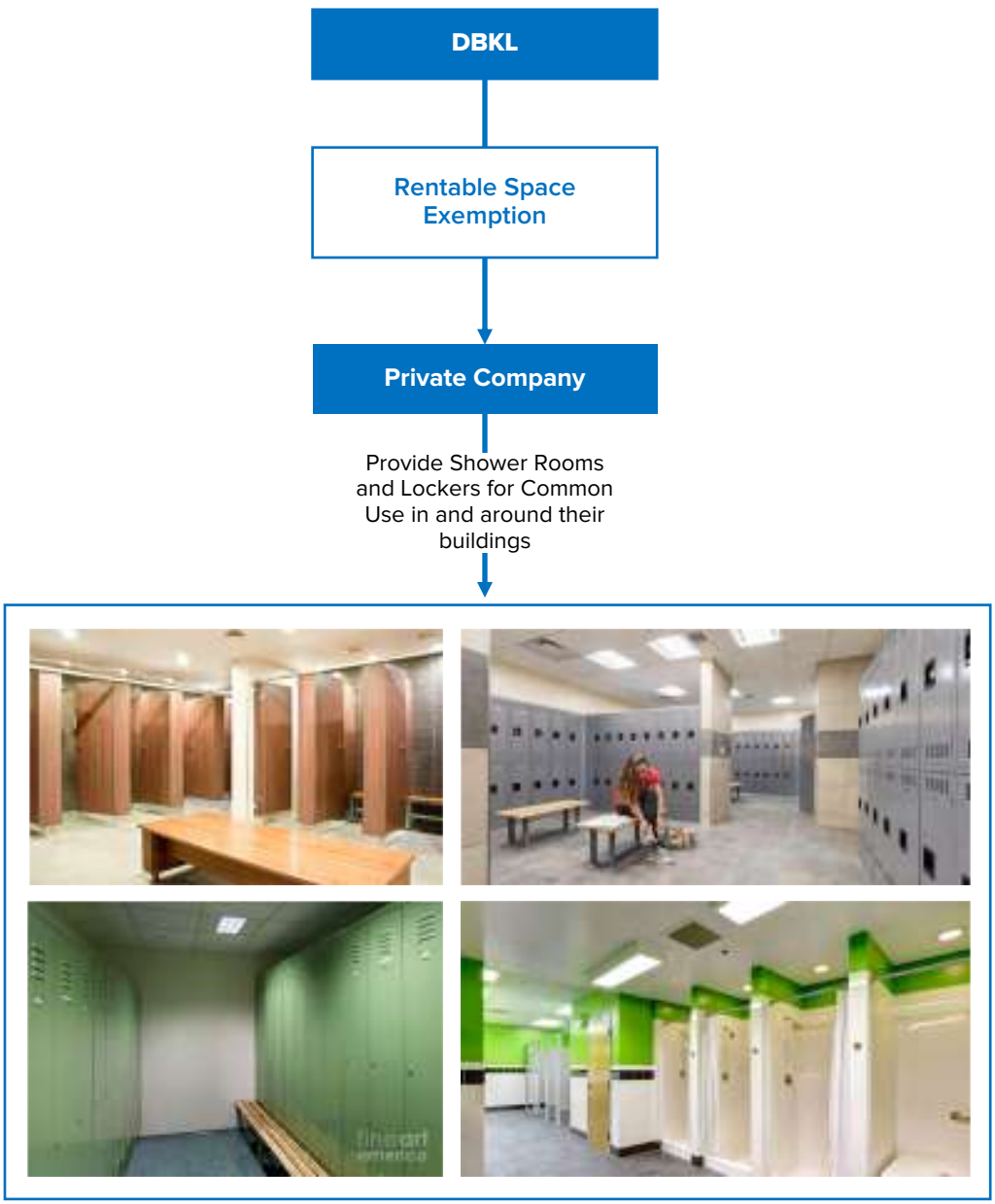
No	Action	Implementing Agency
Action 1	To leverage on the Rentable Space Exemption for developers to provide shower rooms and lockers in new developments	• DBKL (L) • Developers
Action 2	To encourage employers to install CCTVs at 'black spots' to ensure the safety of their staff who cycle to work	• DBKL (L) • Gov. Agencies • Private Companies
Action 3	To partner traders and shop owners in offering discounted meals/drinks to customers who cycle to work and take part in cycling competitions	• DBKL (L) • Cycling NGOs

DETAILED ACTION 2:

To leverage on the Rentable Space Exemption for developers to provide shower rooms and lockers in new developments

Description:

The provision of showers and locker room facilities in commercial buildings will encourage more employees to cycle to work. In order to incentivise building owners / managers to provide these facilities **the** Rentable Space Exemption should be utilised by DBKL



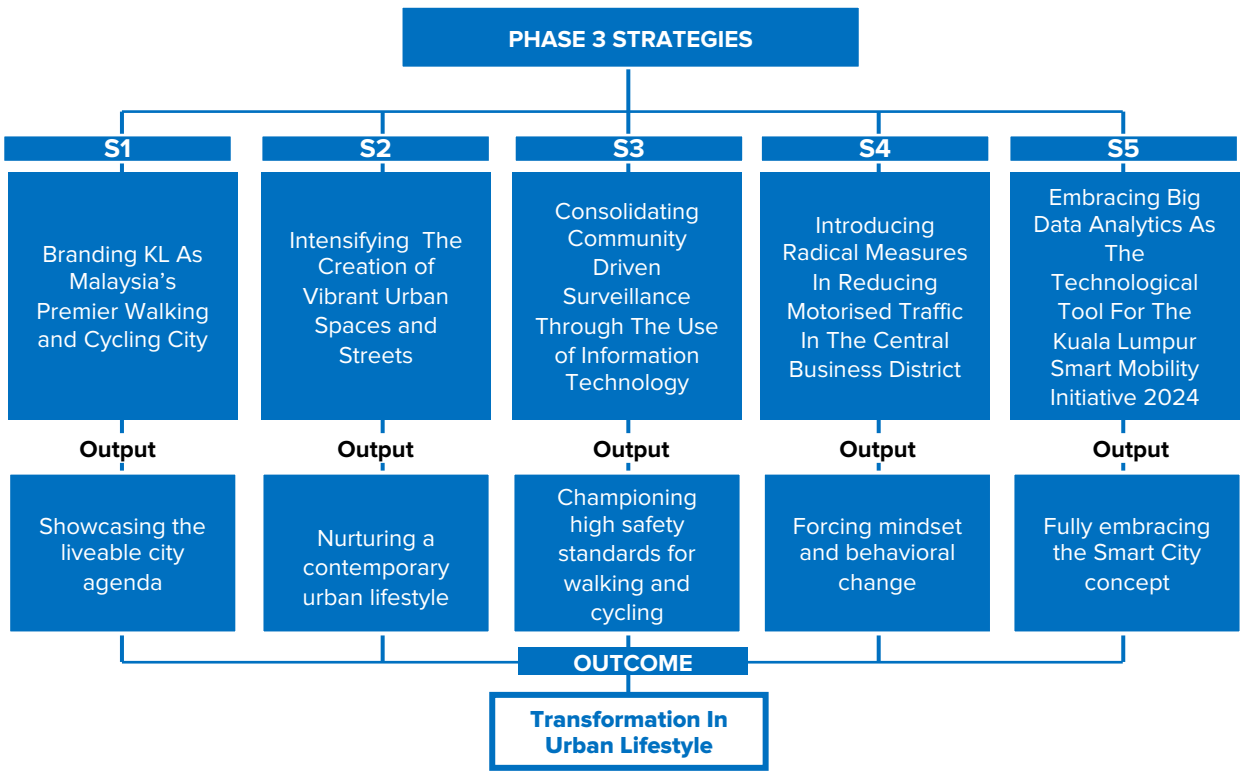
Phase 3:
Transformation in Urban Lifestyle

The final phase of the Master Plan shall focus on the transformation of the urban lifestyle in Kuala Lumpur towards a low carbon, cleaner and healthier environment. A combination of carrot and stick approaches shall be required to incentivise and champion smart mobility within the overall smart city framework as well as punitive measures to hasten behavioural change.

Photo Credit: 9M Studio

Schematic Diagram of Recommendation In Phase 3

The following schematic diagram links the strategies in Phase 3 with the expected output of each strategy and the overall outcome. Detailed of each strategy are described in the following section.



STRATEGY P3-1:
Branding KL As Malaysia's Premier Walking And Cycling City

DESCRIPTION:
In the long term branding Kuala Lumpur as Malaysia's premier walking and cycling city has to be part of national initiative. Given that it is already part of the NKEA 1 the short and medium term strategies have to be consolidated as part of the smart city agenda in which Kuala Lumpur will be the role model for the nation. Under the smart city umbrella, smart mobility will be a major feature and potentially a game changer.

No	Action	Implementing Agency
Action 1	To celebrate active lifestyle by giving out annual awards to community driven walking and cycling initiatives	• KWP (L) • DBKL • Corporate Sectors • KRT
Action 2	To apply big data analytics in evaluating and showcasing the positive impact of walking and cycling among the residents of Kuala Lumpur	• MIMOS (L) • MDEC • DBKL
Action 3	To create healthy living campaigns and celebrate all things cycling and walking such as the Red Bull Million Mile Commute	• MOH (L) • Sport Equipment Vendors • ESPN, Astro Supersport • Event Management Companies
Action 4	To collaborate with key opinion leaders (KOL) to inspire, educate and drive the branding of walking and cycling	• DBKL (L) • Social Media Influencers • Celebrities
Action 5	To develop an app that scores users' performance by tracking their key commuting parameters involving walking and cycling	• DBKL (L) • MDEC • App Developers
Action 6	To use the app for organising fun competitions that offer weekly rewards to motivate users	• DBKL (L) • App Developers

STRATEGY P3-2:
Intensifying The Creation Of Vibrant Urban Spaces And Streets

DESCRIPTION:
In the final phase of the Master Plan the creation of vibrant public places through placemaking will have to be expanded beyond pilot projects to become mainstreamed. The methodology and principles that are applied in the pilot projects should be replicated at all six residential zones to create a sense of place that incorporates walking and cycling as a common feature.

No	Action	Implementing Agency
Action 1	To replicate community driven placemaking piloted at TTDI at the other residential zones	• DBKL (L) • Community association
Action 2	To expand full or partial pedestrianisation along vibrant streets in the residential zones as nodes for street activities	• DBKL (L) • Community association

DETAILED ACTION 1:

To replicate community driven placemaking piloted at TTDI at the other residential zones

Description:

The placemaking project piloted in TTDI is a suitable case study for the replication of community-driven initiatives in other residential zones in Kuala Lumpur. The lessons learned and processes shall be analysed to enhance the viability of future community-driven placemaking projects in KL. Below are the potential areas for community-driven projects

1. Desa Pandan

2. Taman Sri Rampai

3. Taman Wahyu

4. Taman Jaya

5. Taman Midah

6. Desa Setapak

7. Bukit Bangsar

8. Taman Dato' Senu

9. Taman Batu Permai

10. Bdr. Tasik Permaisuri

STRATEGY P3-3:
Consolidating Community Driven Surveillance Through The Use Of Information Technology

DESCRIPTION:
In the long term a more sophisticated approach in protecting cyclists is required to leverage on Information Technology as a powerful tool not only for the use in active surveillance but also in Big Data analytics. To this end the setting up of a Community Surveillance Network (CSN) is imperative that aims to integrate community surveillance that is monitored from a central command system.

No	Action	Implementing Agency
Action 1	To empower local resident associations through the use of IT in recording and reporting violations against pedestrians and cyclists	• DBKL(L) • MIMOS • PDRM
Action 2	To establish a Community Surveillance Network (CSN) command centre that is linked to the individual monitoring centres in residential zones	• DBKL(L) • MIMOS • PDRM
Action 3	To apply big data analytics in anticipating and preventing violations against pedestrians and cyclists in a systematic manner	• DBKL(L) • MIMOS

STRATEGY P3-4:
Introducing Radical Measures In Reducing Motorised Traffic In The Central Business District

DESCRIPTION:
In the long term it is expected that Kuala Lumpur will have a world class public transportation system once all the rail transit and public bus systems are fully operational in 2025. Given that incentives and public awareness campaigns would not be effective in enticing the hard core No Way No How to leave their cars at home, radical measures are required to make it costly for those who still believe in the convenience of driving. To this end a well executed communications plan to gradually introduce measures such as the Area Road Pricing should be able to drastically reduce the overdependence on motorised vehicles in favour of a seamless pubic transformation system.

No	Action	Implementing Agency
Action 1	To implement an area road pricing mechanism upon the eventual completion of MRT3 (Circle Line)	• DBKL (L) • KWP
Action 2	To conduct quarterly user satisfaction surveys to improve the implementation of the area road pricing mechanism	• DBKL(L)
Action 3	To provide a comprehensive mobile app for trip planning and wayfinding to ensure seamless connectivity by public transportation	• DBKL (L) • MDEC • Prasarana
Action 4	To increase public parking rates in the CBD area by 10% annually	• DBKL
Action 5	To restrict the issuance of monthly or seasonal parking passes by progressively reducing the number of passes	• DBKL
Action 6	To reduce the parking requirement for new development close to public transit stations	• DBKL (L) • KPKT

DETAILED ACTION 1:

To implement an area road pricing mechanism upon the eventual completion of MRT3 (Circle Line)

Description:

Urban road pricing schemes have been designed to discourage commuters from using private motorised vehicles. However, before introducing area road pricing, there needs to be excellent public transportation connectivity, linkages and services. The enforcement of area road pricing (ARP) may only take place once the community has access to suitable alternatives. The proposed ARP will first be implemented as a three-month trial run, followed by regular monitoring to tweak and enhance its effectiveness.

Development Concept:

The figure below shows the concept of Road Pricing Approach

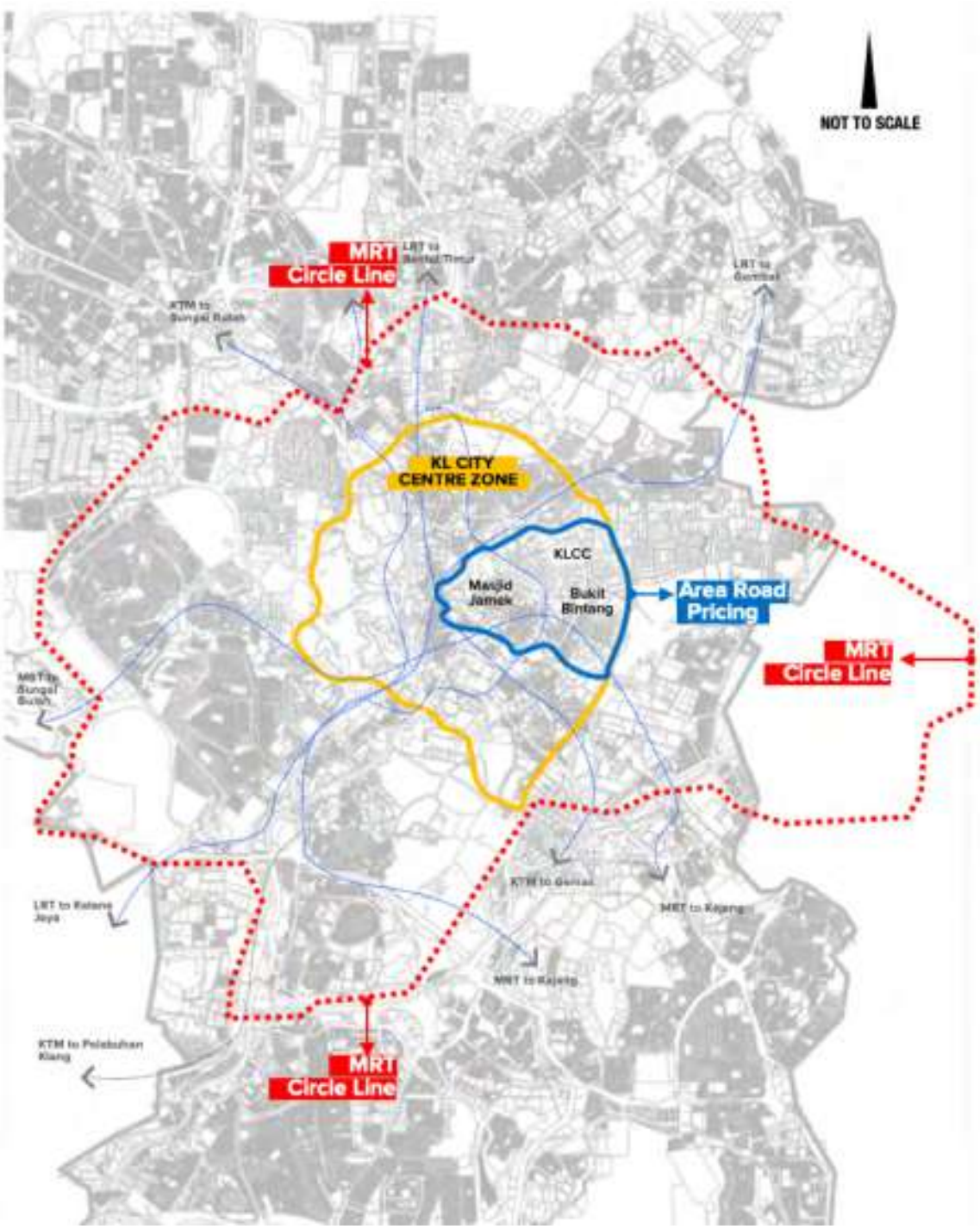
Need to develop supporting enablers before implementing ARP

- Need to enhance public transportation connectivity, linkages and services
- Need to provide adequate park and ride at outskirts of ARP areas
- Need to improve willingness and readiness of the public through educational programmes

Monitoring activities after implementation

- To carry out a three-month trial run to obtain feedback from users on the required improvements to the area road pricing implementation
- To conduct regular monitoring on the effectiveness of area road pricing implementation using indicators that include reduction of congestion, user satisfaction, real and perceived safety, health, etc.

The figure below shows the proposed of area road pricing in KL City Centre



BOX 7:

BEST PRACTICE OF IMPLEMENTING AREA ROAD PRICING (SINGAPORE)

Provision of Enablers Phase

Implementation Phase

1985

A special study for planning development

- Integration of land use and transportation planning to minimise the need for travel.

1988

Development of a comprehensive road network, including capacity maximisation

- Provision of MRT System
- Improving road network and infrastructure around the outskirts of the city center.
- Improve underground road system.

1990

Management of the car population and the demand of road usage to alleviate traffic congestion

- Implementation of Quota Scheme
- Increase petrol price

1995

Provision of quality public transport choices

- Upgrading of the MRT system
- Provide more public buses that can accommodate 3 million users daily

1998

Launch Area Road Pricing

- Minimise traffic volume in CBD.
- Optimise usage of the road network and public transport

Source: 1.Land Transport Authority, Singapore / 2. Sustainable Urban Transport

STRATEGY P3-5:
Embracing Big Data Analytics As The Technological Tool For The Kuala Lumpur Smart Mobility Initiative 2024

DESCRIPTION:
Ultimately the initial strategies and actions formulated in the Master Plan will become a means to an end. For Kuala Lumpur to become a world class city, it has to fully embrace the smart city agenda in which Smart Mobility will be a crucial component. In the long term the Kuala Lumpur Smart Mobility Initiative will need to be introduced by 2024 by embracing Big Data analytics as the foundation for the transformation of Kuala Lumpur into a world class city.

No	Action	Implementing Agency
Action 1	To establish a network of Internet-of-Things (IoT) sensors to collect real-time information for trip planning and monitoring purposes	• MIMOS (L) • DBKL
Action 2	To establish a network of IoT-based actuators that responds to input from sensors to support actuated cross-walk signal	• MIMOS
Action 3	To establish a centralised communication centre that coordinates transit operation and emergency services	• MIMOS (L) • Prasarana • DBKL
Action 4	To create a centralised Data Centre to analyse patterns of travel behaviour and overcrowding based on Big Data Analytics	• MIMOS

DETAILED ACTION 1:

To establish a network of Internet-of-Things (IoT) sensors to collect real-time information for trip planning and monitoring purposes

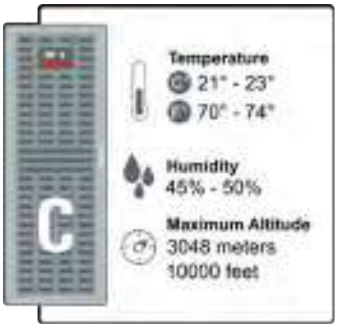
Description:

Utilising technology to collect real time information is beneficial to both the public and the city managers. Collecting big data using IoT sensors can assist in trip planning, delay reduction, travel time optimisation, etc. In addition, the data could also be used to show indirect benefits, such as how the projects and initiatives have led to lower urban heat island temperatures, healthy populations, etc.

Pedestrian and Cycling Information

Pedestrian and Cycling Volumes

Ambient



Readings and Transport Operation

Congestion Data

Train Or Bus Departure / Travel Time

5

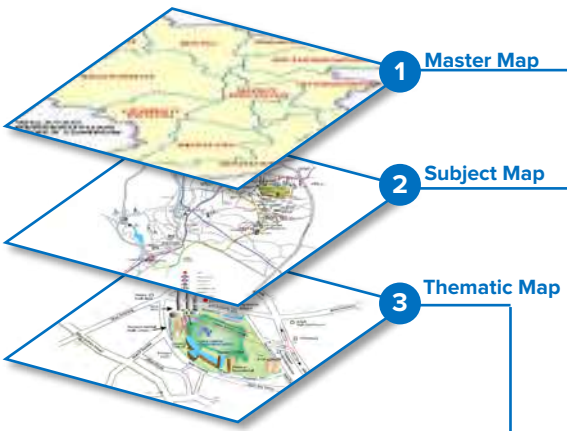
Chapter 05
PHYSICAL DEVELOPMENT

Chapter 4 enumerates the strategies and actions for the Masterplan to achieve its intended objectives. It follows that the strategies and actions of Chapter 4 are categorized into two components - the Physical and Non-Physical Developments. This chapter (i.e. Chapter 5) then translates the Physical Development strategies and actions of Chapter 4 into actual physical infrastructure development plan. The plan provided in this chapter focuses on providing a safe, accessible and comfortable passages for both pedestrians and cyclists that will catalyze active mobility and lifestyle.

Photo Credit: Izuddin Helmi Adnan

Introduction

The plans for infrastructure development of pedestrian and bicycle facilities in Kuala Lumpur are divided and organized into three layers – each focusing at different level of depth and details. Layer 1 - the Master Map – provides plans at the macro, i.e. city, level. In Layer 1, plans are formulated for the entire territory of Kuala Lumpur as a single, coherent entity. Layer 2 – the Subject Map – is the intermediate level map which provides more detailed plans at the Strategic Development Zones level. At this Layer 2 level, each of the six Strategic Development Zones within Kuala Lumpur will have plans drawn based on the specific characteristics, needs and issues within the zones. Layer 3 – the Thematic Map – is the most micro of three layers/maps. The Thematic Maps detail out plans drawn at the Sub-Development Zones level – which are the local zones within each of the Strategic Development Zones. Combined, these maps provide a comprehensive, structured and integrated planning ecosystem for the benefits of pedestrians and cyclists in Kuala Lumpur.



LAYER 1 **KL TERRITORY**

- Proposed conceptual physical developments in KL Territory
- Proposed priority development areas
- Macro scale of proposed bicycle and pedestrian infrastructures/facilities across all 6 strategic development zones

LAYER 2 **STRATEGIC DEV. ZONE**

- Proposed detailed physical developments (e.g. network expansion, connectivity, continuity, etc.) in each of the six Strategic Development Zones within Kuala Lumpur
- Identify & prioritize high-volume pedestrian walkways within each zone that have high improvement potential

LAYER 3 **SUB DEV. ZONE**

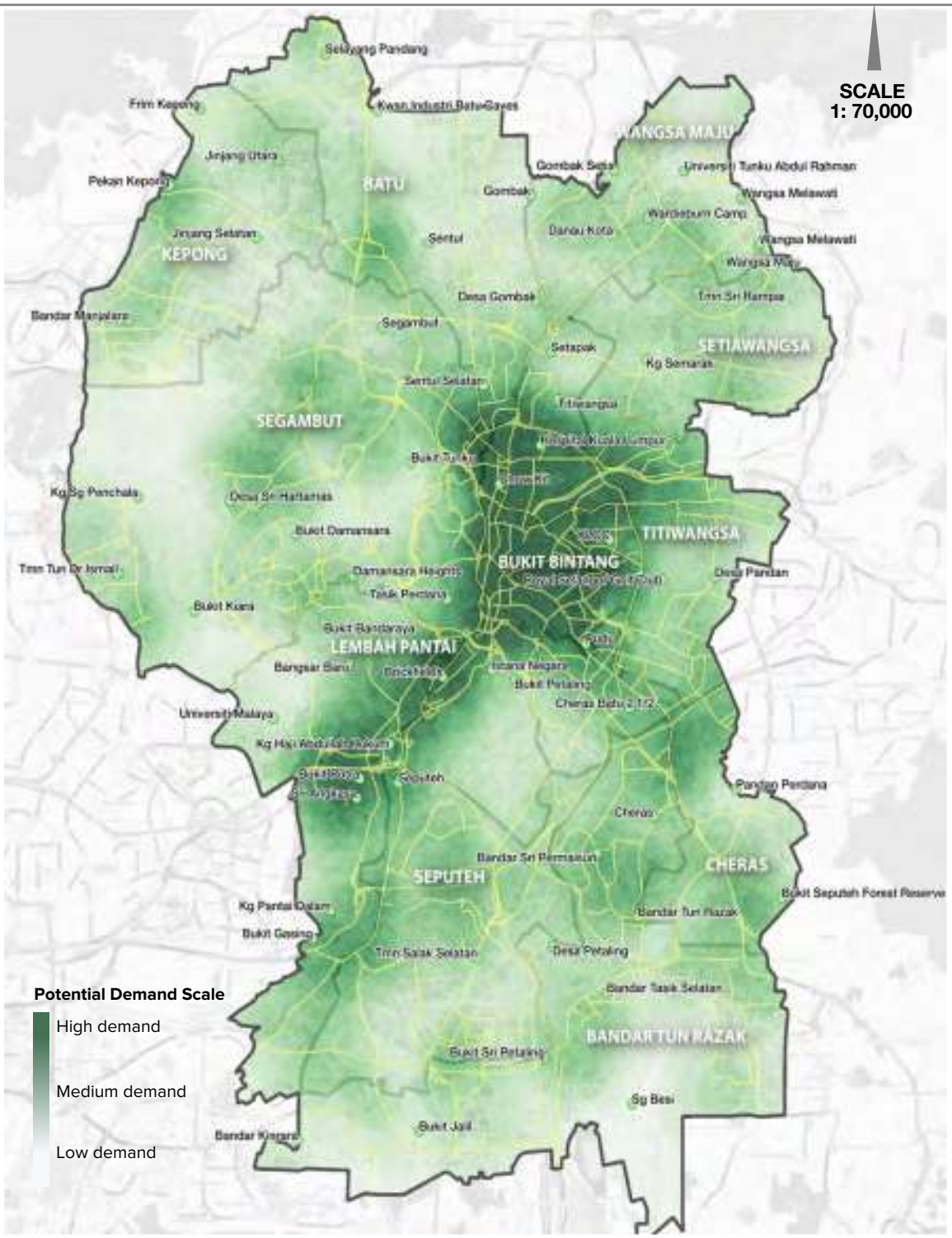
- Thematic maps for sub-development zones
- In-depth, detailed proposals for sub-zones within each of the Strategic Development Zones.
- Contain details of alignment, cross-junctions, problem spots, recommendation points, etc

High Walking Demand Potential Areas in Kuala Lumpur

The density map shows concentration of land uses with high walking demand potentials (i.e. high demand points). High demand points include, among others, educational institutions, commercial complexes, government complexes, hospitals, apartments/condominiums/flats, etc. Clearly, the CBD and the Lembah Pantai-Bangsar corridor represent the areas with the highest concentration of land uses with the highest demand potential for walking and cycling. Subsequently, other areas like Cheras, Seputeh, and Segambut generates low to medium potential demand (Map 5-1)

The benefit of density maps is that they identify areas with high concentration of High Demand Points i.e. land uses with potential to generate high walking and cycling demands. Land uses like apartments and condominiums, schools and educational institutions, commercial complexes, hospitals and clinics, government buildings, etc. are examples of High Demand Points. As a strategy, corridors with high concentrations of High Demand Points will be assigned the highest priority for infrastructure development. Within each of the zones the proposed strategies for infrastructure development will be discussed in depth, highlighting the zones' specific characteristics, needs and issues. Hence, the strategies for the CBD of Kuala Lumpur, for example, will differ from those of the other zones, and vice versa (Map 5-1).

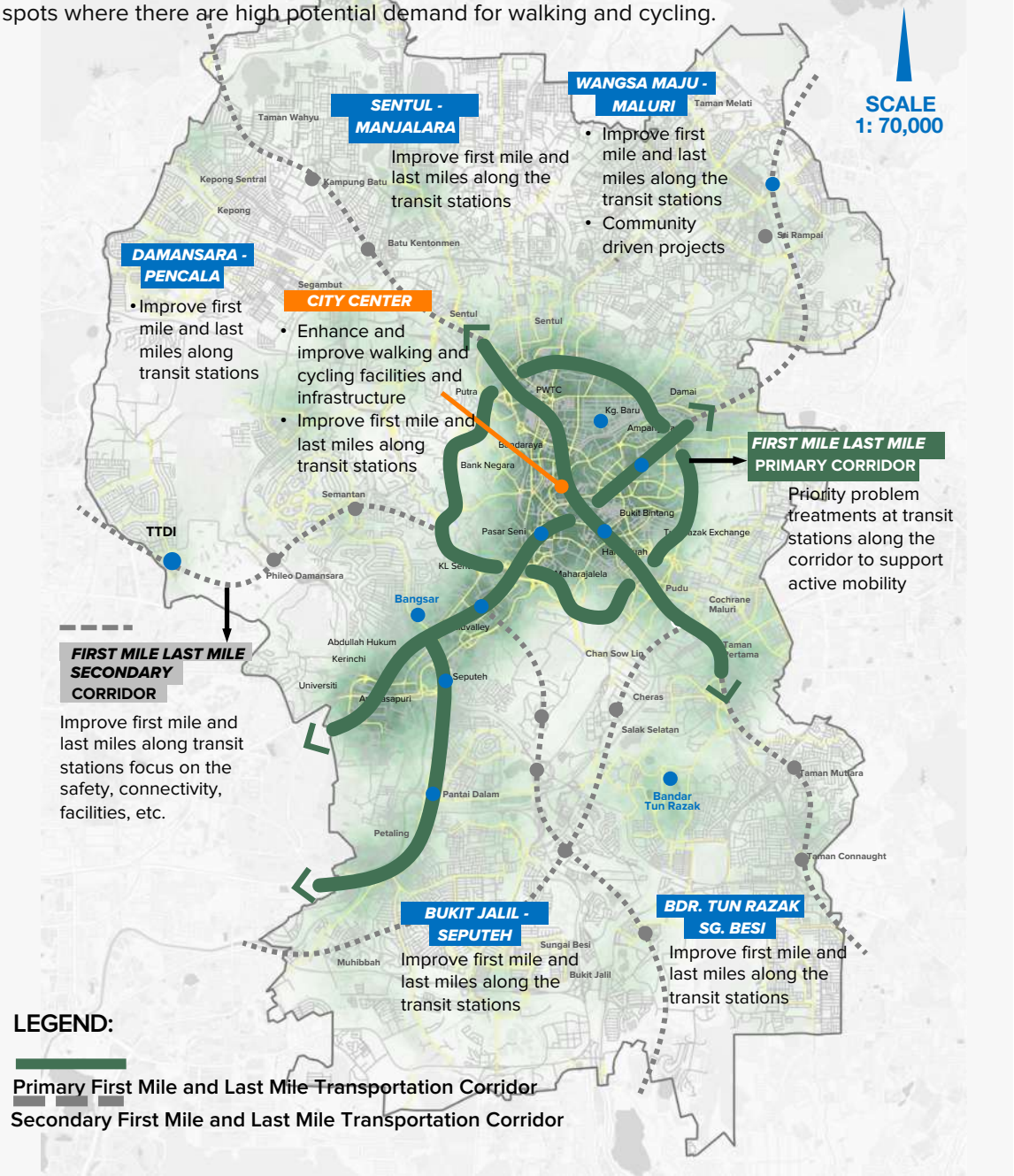
Photo Credit: Yuriy Kovalev



Map 5-1: **High Walking Demand Potential Areas in Kuala Lumpur**

Overall Conceptual Development

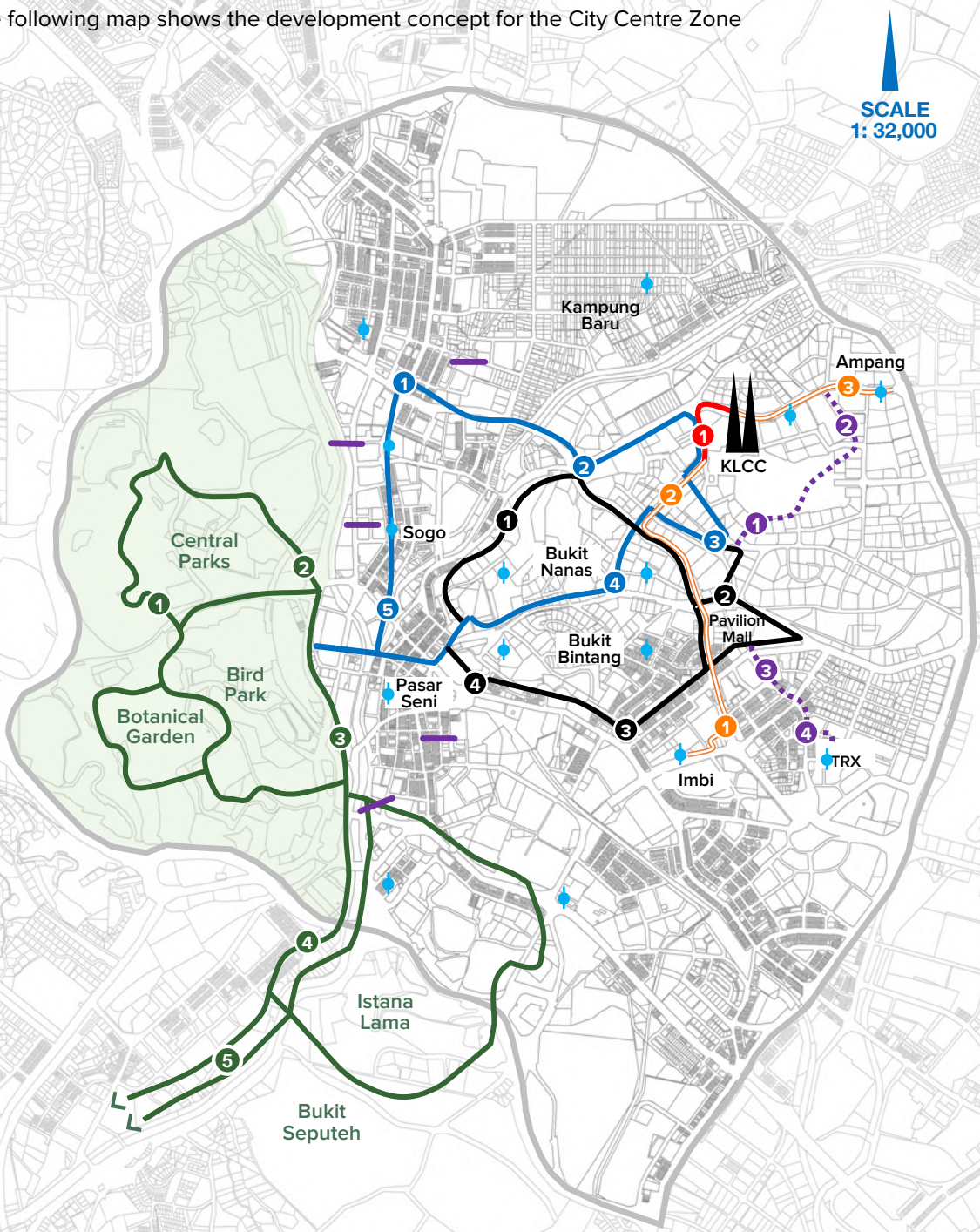
The following map illustrates the overall conceptual development proposed in this Master Plan. The recommendations are divided according to the six strategic development zones. Within each of the zones, the primary transportation corridor is indicated along which the first- and last-mile treatments/improvements are concentrated. In addition to the development along the primary transportation corridor, pedestrian and cycling infrastructures are also proposed at spots where there are high potential demand for walking and cycling.



Map 5-2: **Overall Conceptual Development Walking and Cycling Master Plan**

City Centre Strategic Development Zones

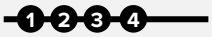
The following map shows the development concept for the City Centre Zone



Map 5-3: Development Concept For City Centre Strategic Development Zone

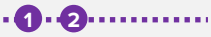
Legend:

Existing Cycling Network (Blue Lane Loop)



Proposed Expansion Cycling Lane in City Center

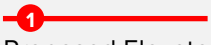
Proposed Elevated Walkways Connecting Imbi to Ampang



Proposed New Pedestrian Walkway KLCC to Ampang Park

Proposed New Pedestrian Walkway Pavilion to TRX

Proposed Recreational Cycling Lane Linked to Existing Cycling Lane



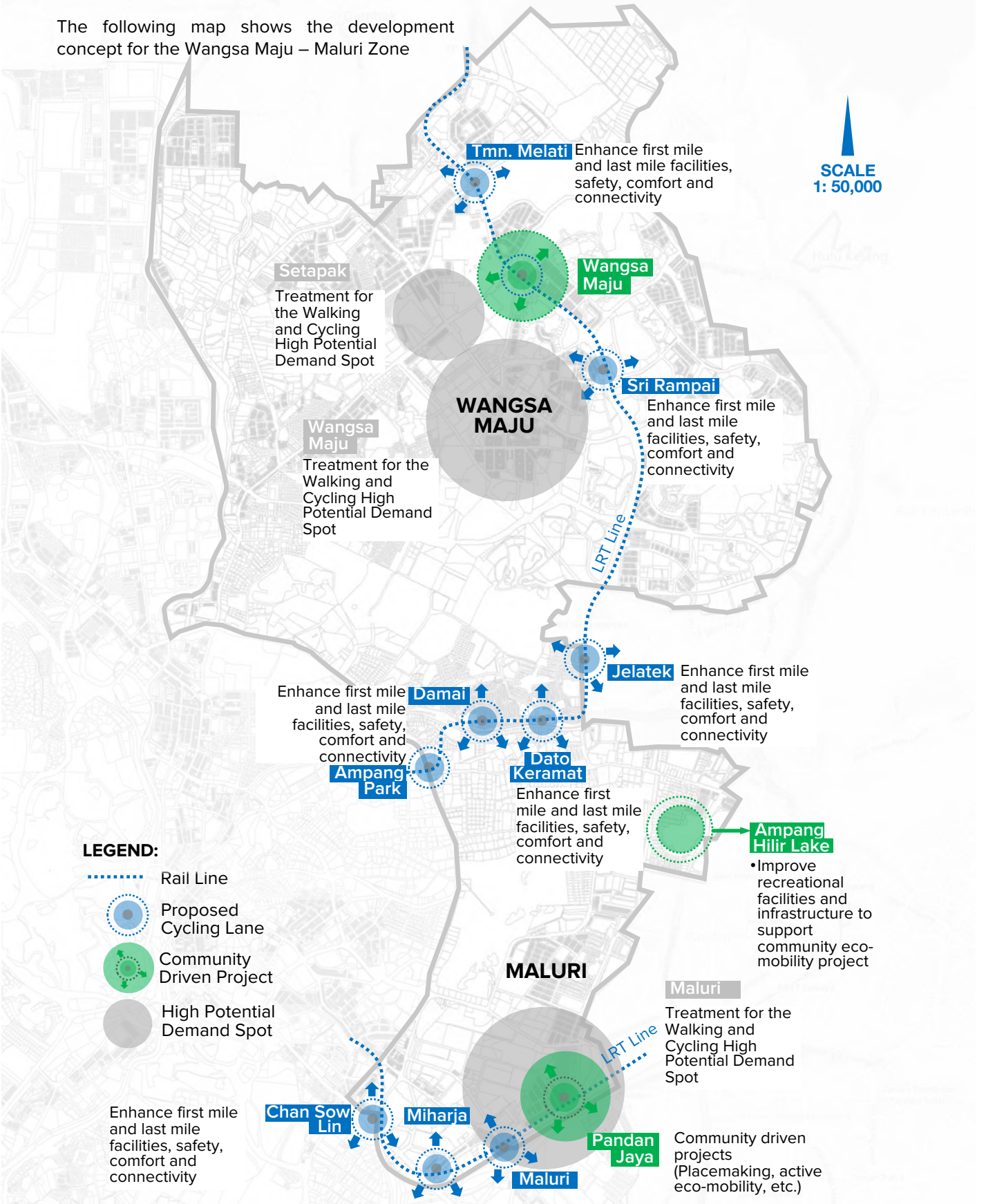
Proposed Elevated Pedestrian Mall Opposite KL Twin Towers

Enhance Existing Pedestrian Linkages

Enhance First Mile Last Mile Facilities at Transit Stations

Wangsa Maju – Maluri Strategic Development Zone

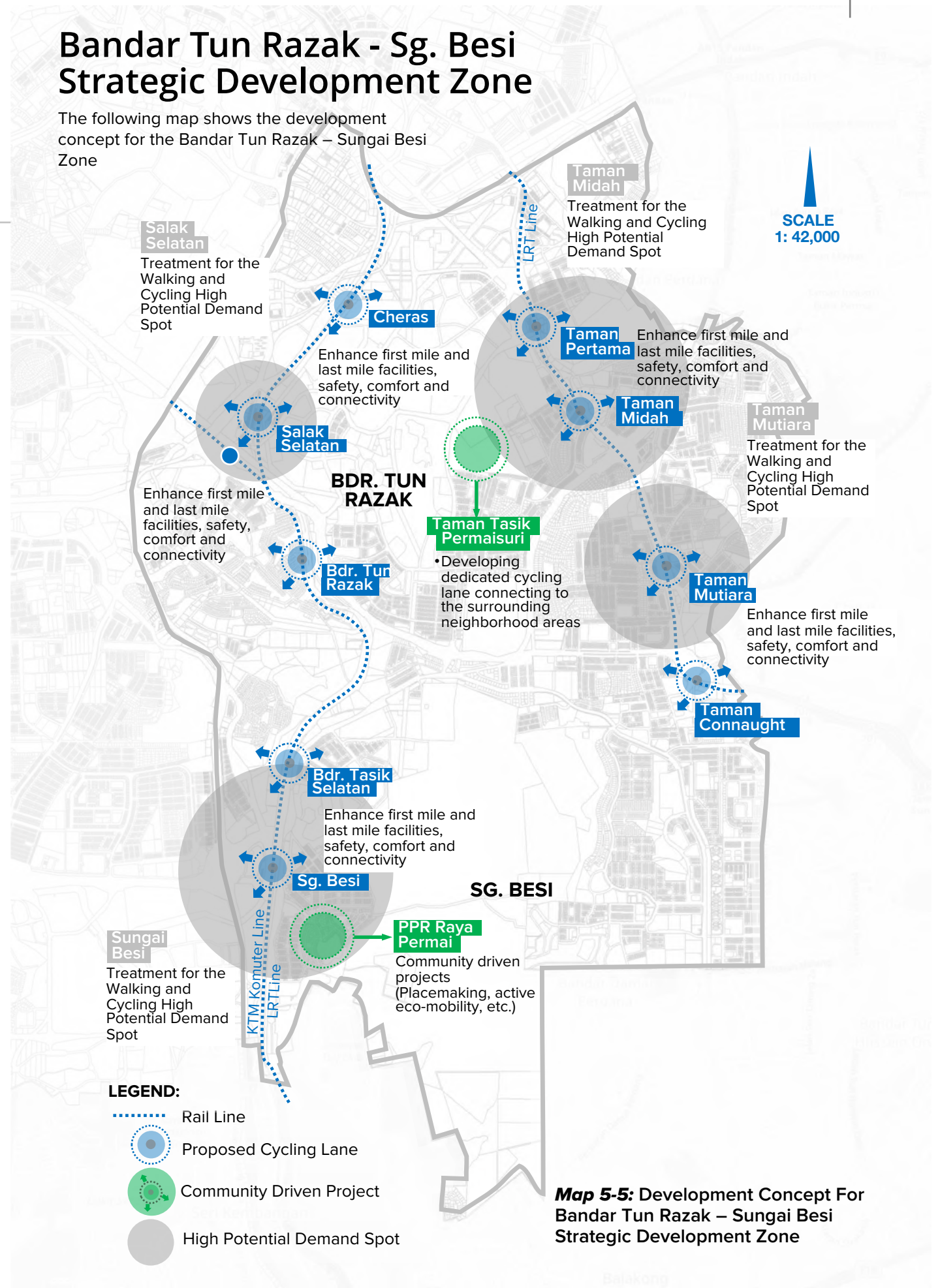
The following map shows the development concept for the Wangsa Maju – Maluri Zone



Map 5-4: **Development Concept For Wangsa Maju – Maluri Strategic Development Zone**

Bandar Tun Razak - Sg. Besi Strategic Development Zone

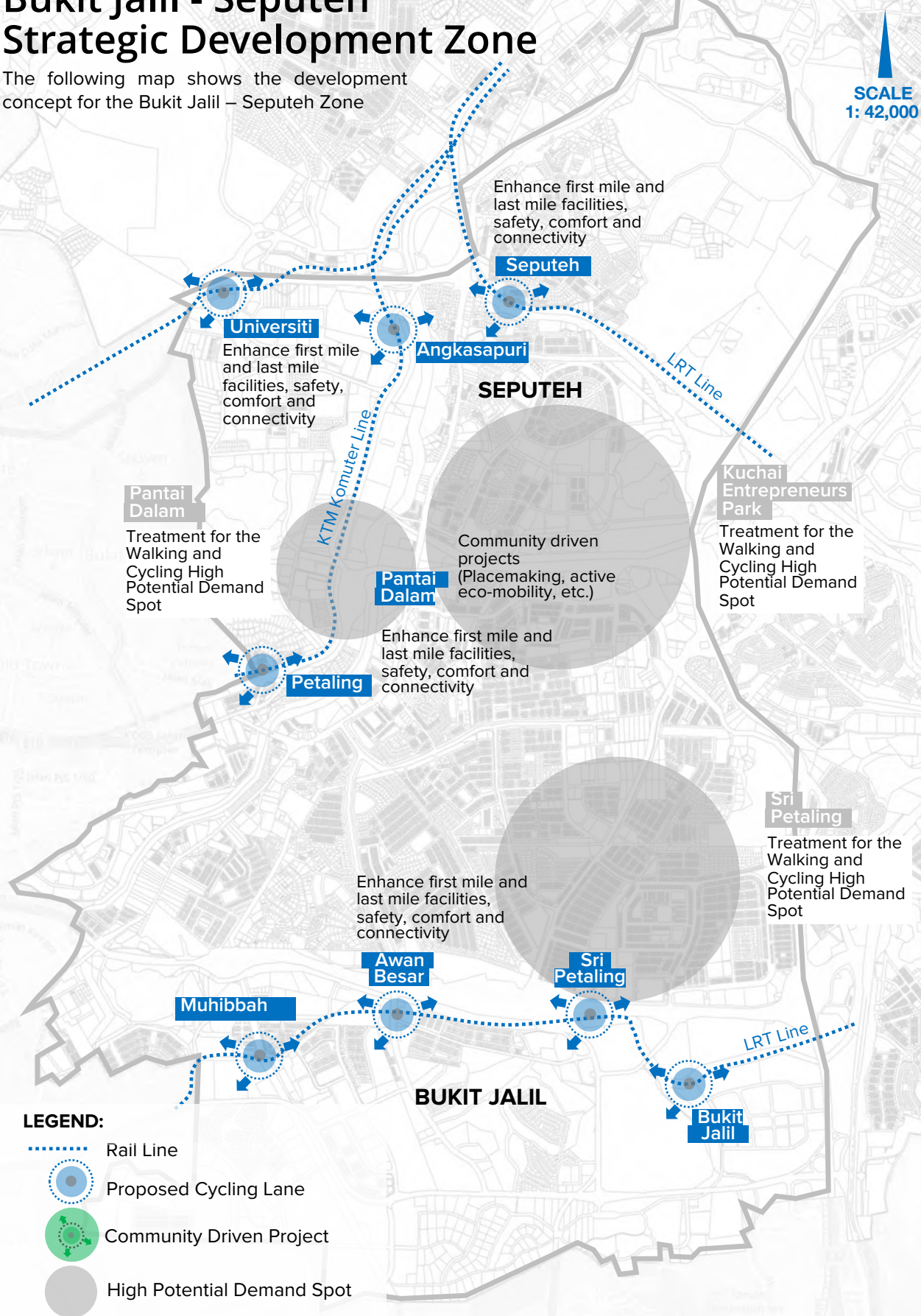
The following map shows the development concept for the Bandar Tun Razak – Sungai Besi Zone



Map 5-5: **Development Concept For Bandar Tun Razak – Sungai Besi Strategic Development Zone**

Bukit Jalil - Seputeh Strategic Development Zone

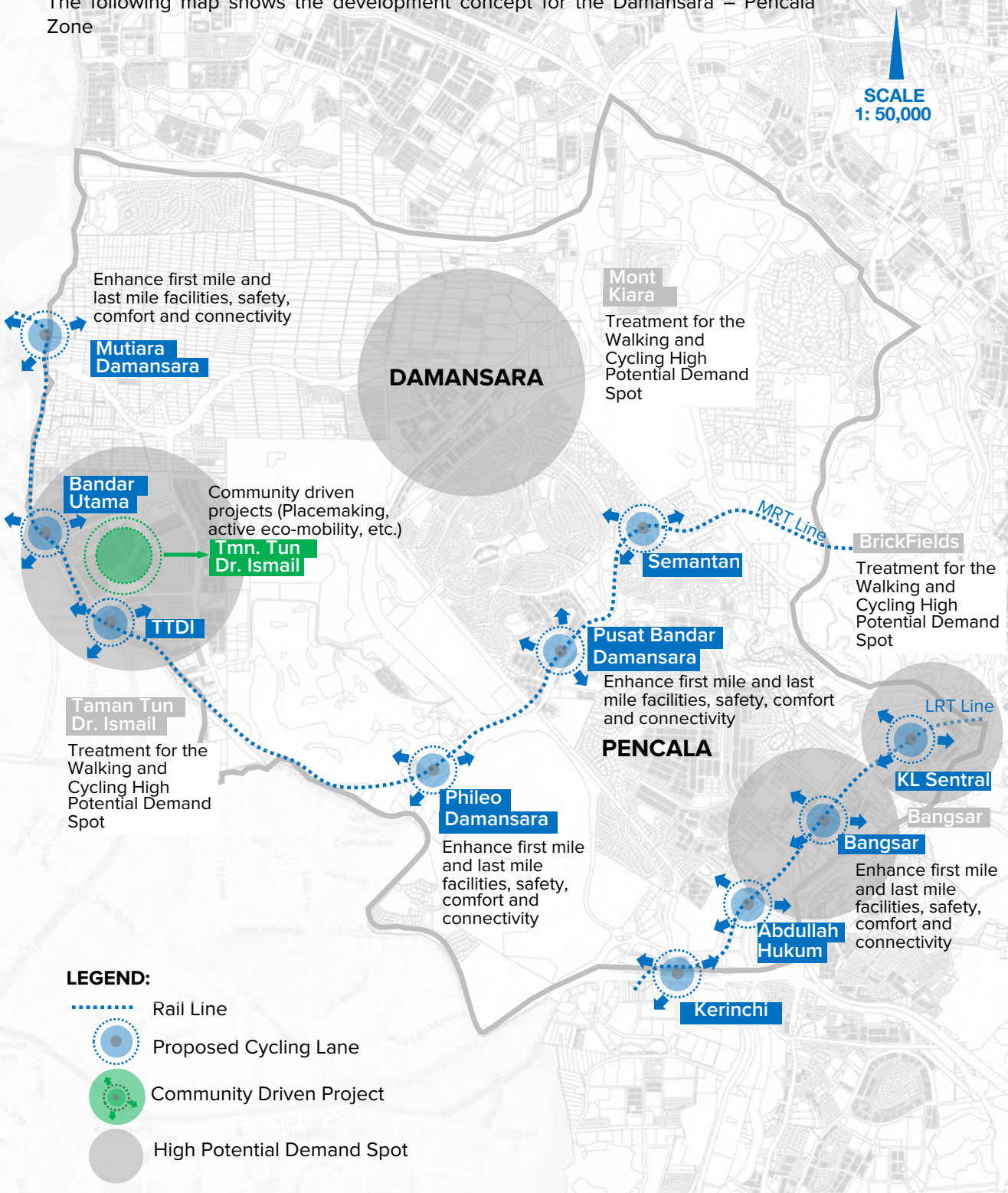
The following map shows the development concept for the Bukit Jalil – Seputeh Zone



Map 5-6: **Development Concept For Bukit Jalil – Seputeh Strategic Development Zone**

Damansara - Penchala Strategic Development Zone

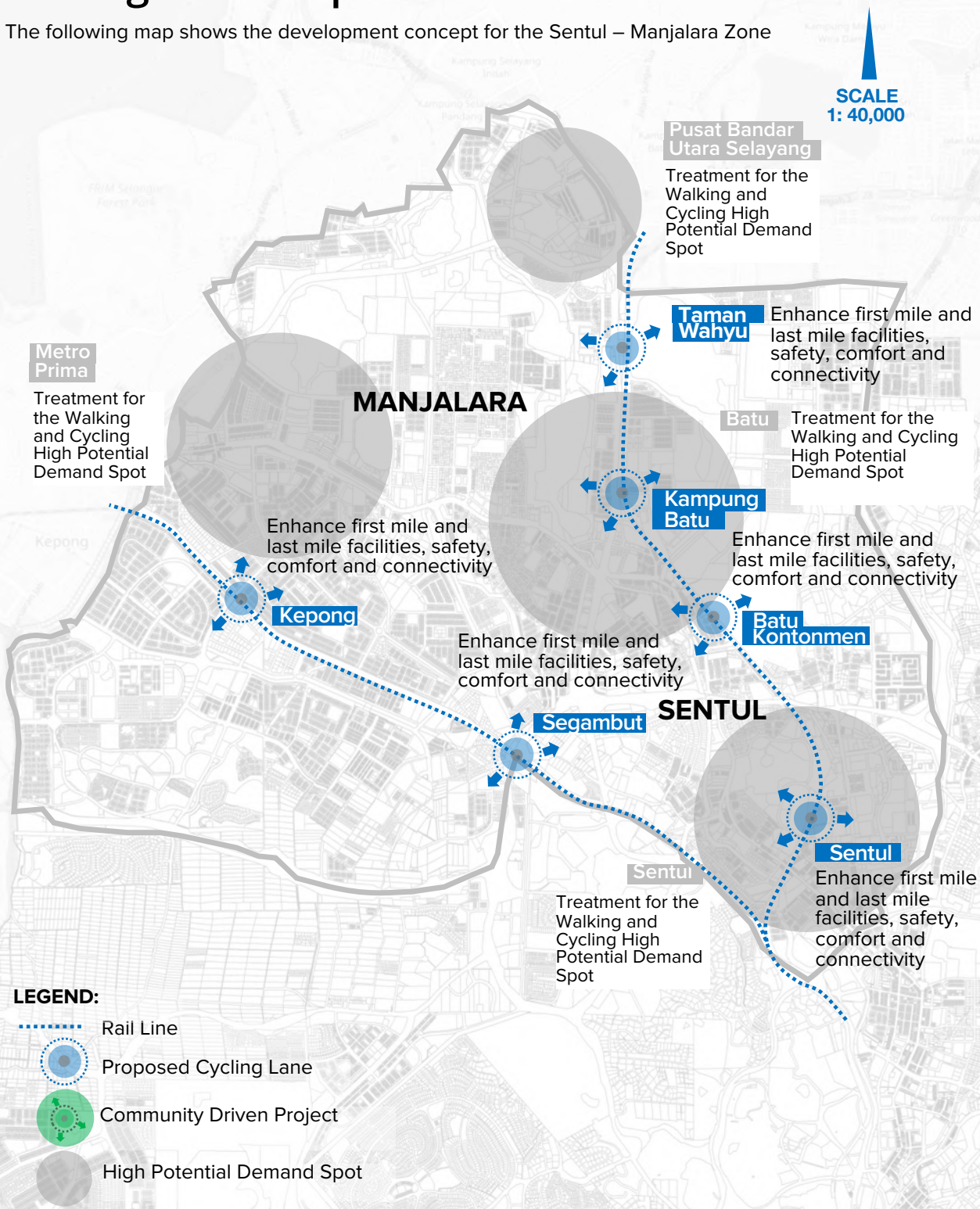
The following map shows the development concept for the Damansara – Pencala Zone



Map 5-7: **Development Concept For Damansara – Penchala Strategic Development Zone**

Sentul - Manjalara Strategic Development Zone

The following map shows the development concept for the Sentul – Manjalara Zone



Map 5-8: **Development Concept For Sentul – Manjalara Strategic Development Zone**

Scope and Details of Physical Developments

Four initiatives were formulated to spearhead KL into becoming a city friendly to both pedestrians and cyclists. The four initiatives compliment and support the non-physical initiatives to create a coherent and complete plan for encouraging and motivating the adoption of active mobility as well as for supporting the needs of both pedestrians and cyclists for a safe, comfortable and connected physical infrastructures. The goal of the four initiatives is to create a society that will walk and cycle, not only as a recreational activity, but as a mainstream transportation mode of choice for commuting.

Initiative 1	Initiative 2	Initiative 3	Initiative 4	Initiative 5
				
Enhance First-Mile and Last-Mile Walking and Cycling Experiences	**Construct Elevated Pedestrian Expressway (EPEX)**	**Improve Existing Pedestrian Walkway**	**Expand Cycling Lane Infrastructure and Facilities**	**Develop Walkway and Bicycle Lane Infrastructure at High Potential Demand (HPD) Spots**
• Walking and cycling experience within 800m radius from transit stations to high demand points must be enhanced to guarantee continuity, safety, security and comfort.	• Elevated passages or bridges that directly connect the High Demand Points. • Preferably, the elevated passages be shared between different users – pedestrians and users of Personal Mobility Devices (PMD) e.g. e-Scooters.	• Existing at-grade walkways must be improved to guarantee pedestrian continuous, unobstructed, safe, secure and comfortable walking experience. • Include enhancement of cross-junctions to protect pedestrians from possible conflicts with motorised vehicles.	• Expand existing blue bicycle lane • Ensure connected, safe linkages for cyclists and users of PMDs	• Connect HPD spots to transit nodes with walkway and bicycle lane • Improve quality – safety and comfort – of existing walkway and bicycle lane • Upgrade junctions around the HPD spots to provide total protection for pedestrians and cyclists

INITIATIVE 1:
Enhance First-Mile and Last-Mile Walking and Cycling Experiences

Description:
One of the main determinants of participation in walking and cycling is the connectedness within First-Mile and Last-Mile of the transit stations. This refers to the physical infrastructures that are available from the users' home to the transit station (i.e. the First-Mile) and from the transit station to the users' final destination (i.e. the Last-Mile). This initiative outlines the issues and proposed improvements within selected transit stations within KL. Along the first mile and last mile primary corridors, identified 35 transit stations that need to be enhanced. To illustrate the plan, proposed 12 transit stations within CBD as a pilot projects with the Ampang LRT station is used as example, which can later be duplicated at the remaining stations.

35 **Stations Along The First Mile And Last Mile Primary Corridor**

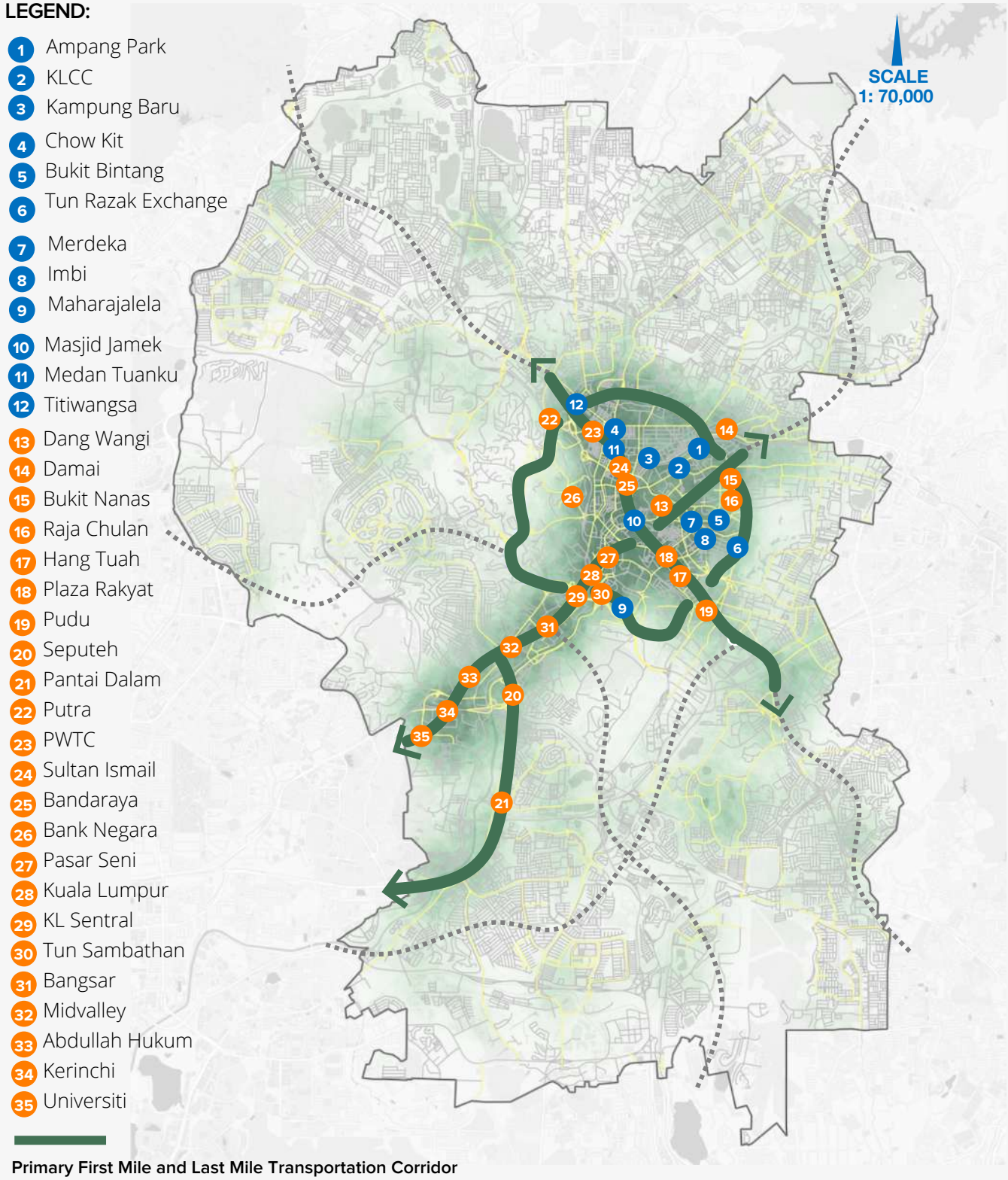
12 **Stations proposed as a pilot projects**

1. Ampang Park
2. KLCC
3. Kampung Baru
4. Chow Kit
5. Bukit Bintang
6. Tun Razak Exchange
7. Merdeka
8. Imbi
9. Maharajalela
10. Masjid Jamek
11. Medan Tuanku
12. Titiwangsa

13. Dang Wangi
14. Damai
15. Bukit Nanas
16. Raja Chulan
17. Hang Tuah
18. Plaza Rakyat
19. Pudu
20. Seputeh
21. Pantai Dalam
22. Putra
23. PWTC
24. Sultan Ismail

25. Bandaraya
26. Bank Negara
27. Pasar Seni
28. Kuala Lumpur
29. KL Sentral
30. Tun Sambathan
31. Bangsar
32. Midvalley
33. Abdullah Hukum
34. Kerinchi
35. Universiti

The map below shows the distribution of 35 transit stations along the first mile and last mile primary corridors.



Map 5-9: **Distribution of 35 Transit Stations Along First Mile and Last Mile**

Example : LRT Ampang Park Station

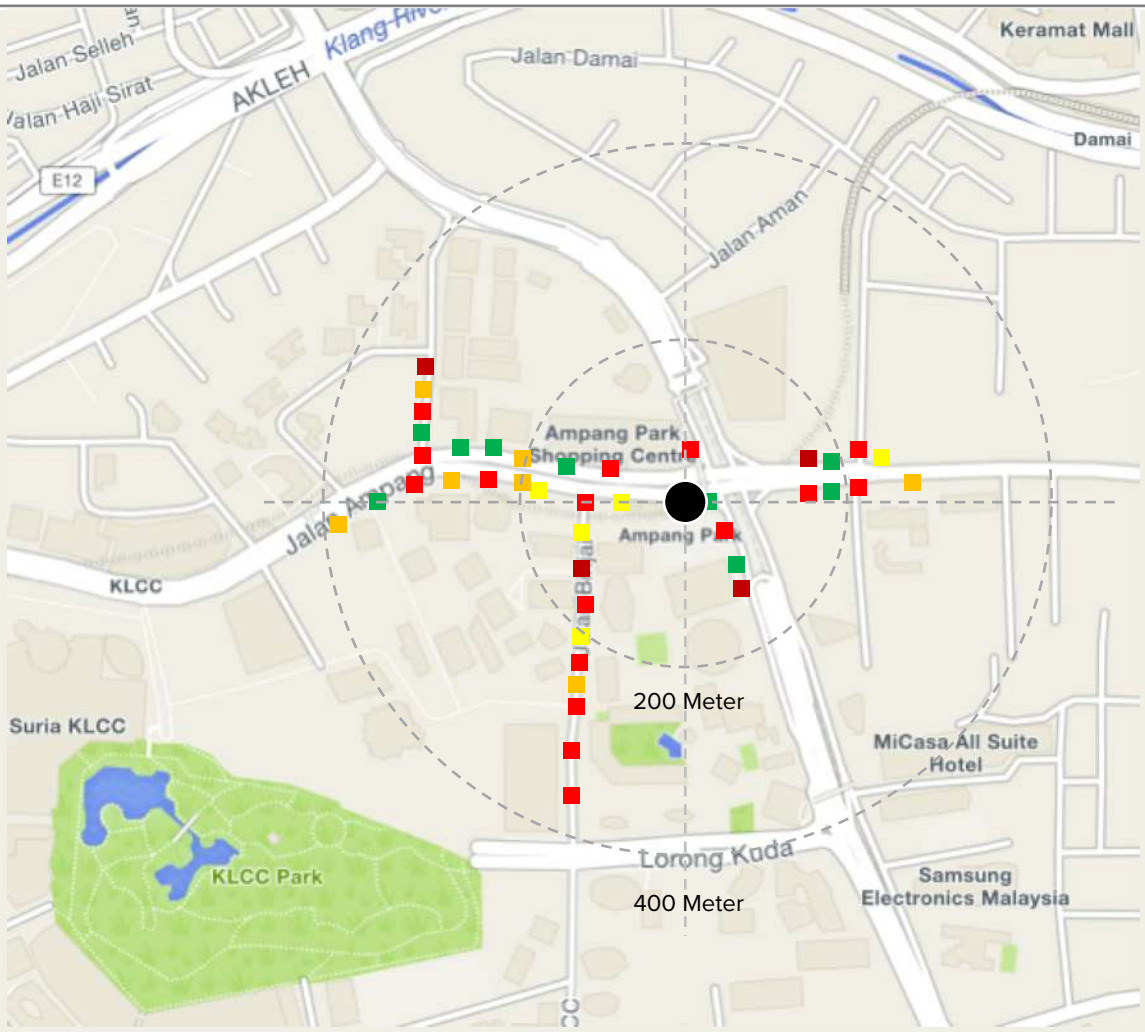


Fig. 1: Problems Spots at Ampang Park LRT Station

The map shows 40 problem spots that need to be solved by the DBKL

Aspect	Problem Spots
Safety and security	16
Linkages	4
Maintenance	7
Disable facilities	5
Amenities	9
Total	**40**

Legend:	
●	Transit Station
■	Safety and Security Element
■	Linkages
■	Maintenance
■	Disabled Facilities
■	Amenities
◌	Radius Distance

Example of Improvement at Surrounding Ampang park LRT Station

Pedestrian crossing with priority to motorised vehicles

Inconsistent width of walkway. Presence of physical obstruction (tree)

Inappropriate placement of landscape feature

Absence of appropriate crossing marking and apparatus (e.g. pedestrian crossing signage)

Illegal parking of vehicles obstructing pedestrians passage

Movements of heavy vehicles endangering pedestrian safety

Over leaning of tree branches posing safety hazards to pedestrian

Illegal entrance of motorcycles creating movement conflicts with pedestrians

Illegal parking of motorcycles creating obstructions especially to disabled and physically challenged pedestrians

Example : KLCC LRT Station

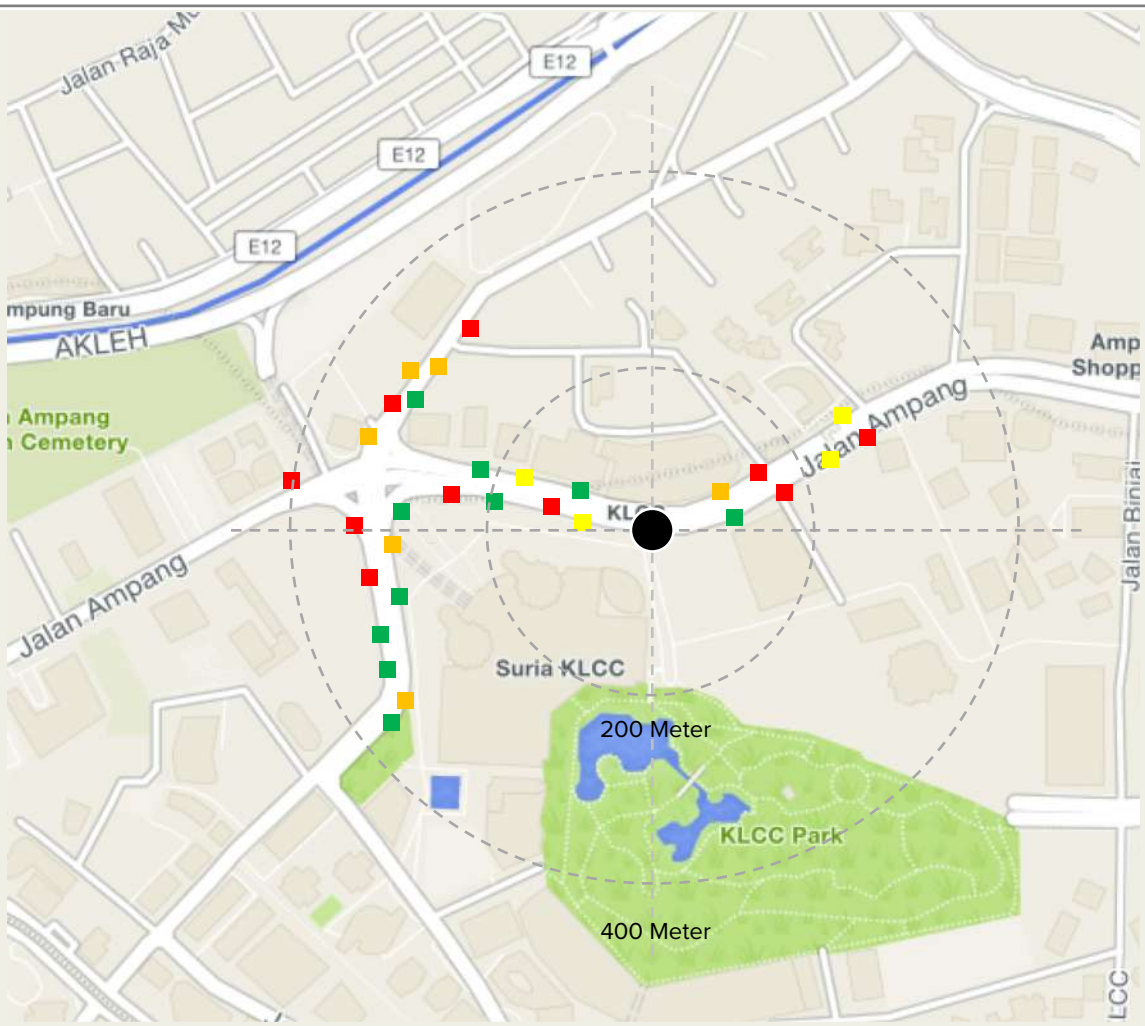


Figure. 2: Problems Spots at KLCC LRT Station

The map shows 31 problem spots that need to be solved by the DBKL

Aspect	Problem Spots
Safety and security	11
Linkages	0
Maintenance	6
Disable facilities	4
Amenities	10
Total	**31**

Legend:	
●	Transit Station
■	Safety and Security Element
■	Linkages
■	Maintenance
■	Disabled Facilities
■	Amenities
◌	Radius Distance

Example : Kampung Baru LRT Station

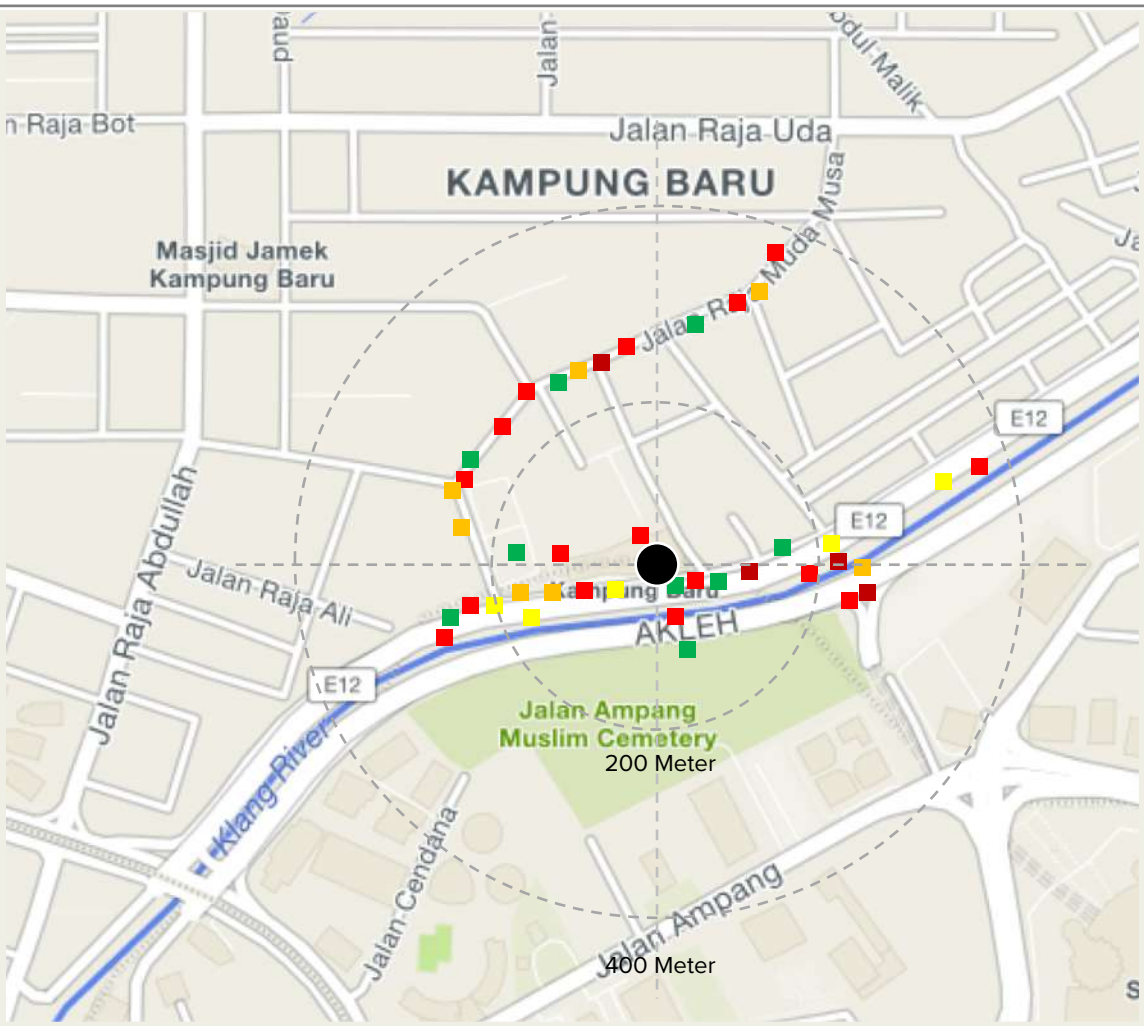


Figure 3: Problems Spots at Kampung Baru LRT Station

The map shows 40 problem spots that need to be solved by the DBKL

Aspect	Problem Spots
Safety and security	16
Linkages	4
Maintenance	7
Disable facilities	5
Amenities	9
Total	**40**

Legend:	
	Transit Station
	Safety and Security Element
	Linkages
	Maintenance
	Disabled Facilities
	Amenities
	Radius Distance

Example : Chow Kit Monorail Station

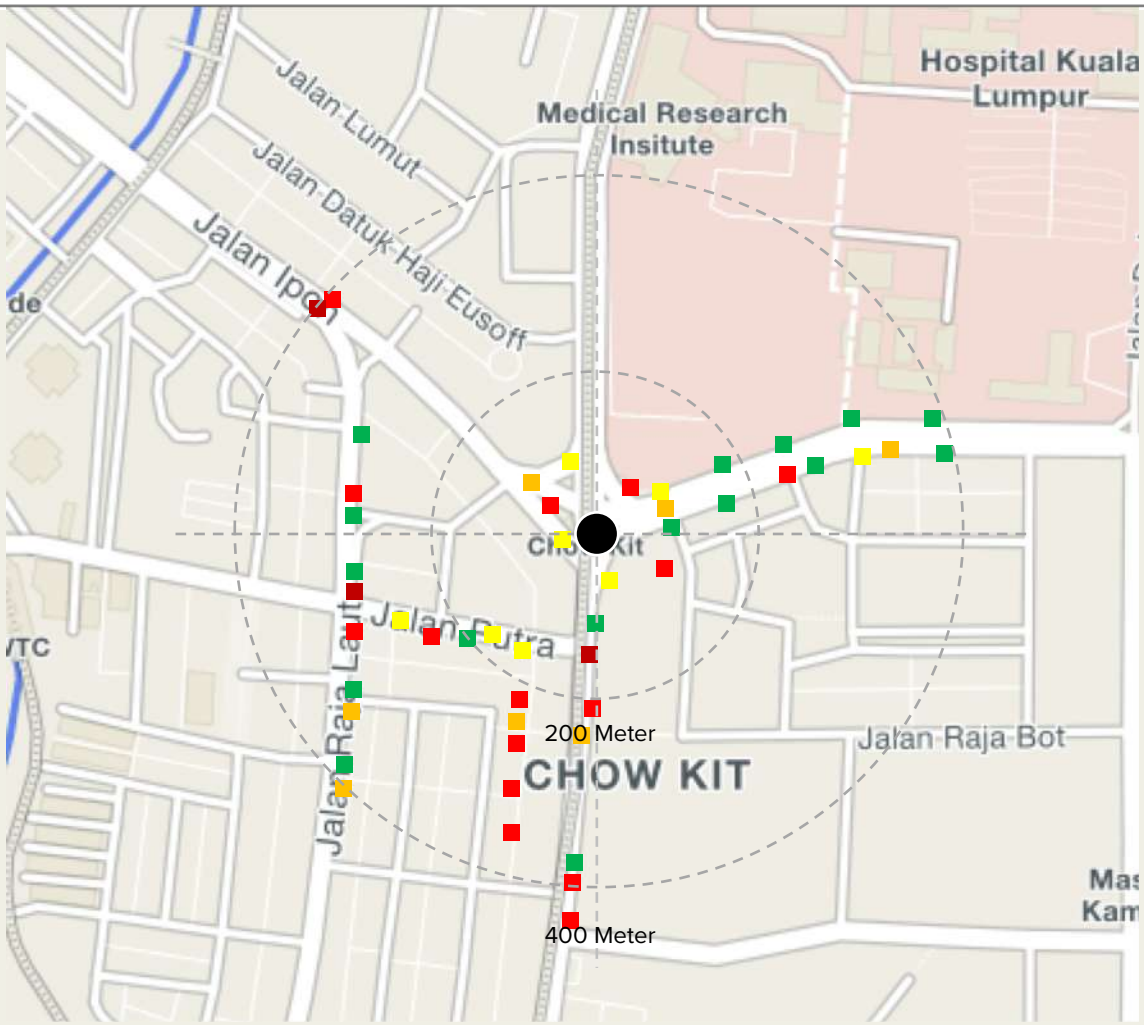


Fig. 4: Problems Spots at Chow Kit Monorail Station

The map shows 47 problem spots that need to be solved by the DBKL

Aspect	Problem Spots
Safety and security	13
Linkages	3
Maintenance	7
Disable facilities	8
Amenities	16
Total	**47**

Legend:	
●	Transit Station
■	Safety and Security Element
■	Linkages
■	Maintenance
■	Disabled Facilities
■	Amenities
◌	Radius Distance

Example : Bukit Bintang LRT Station

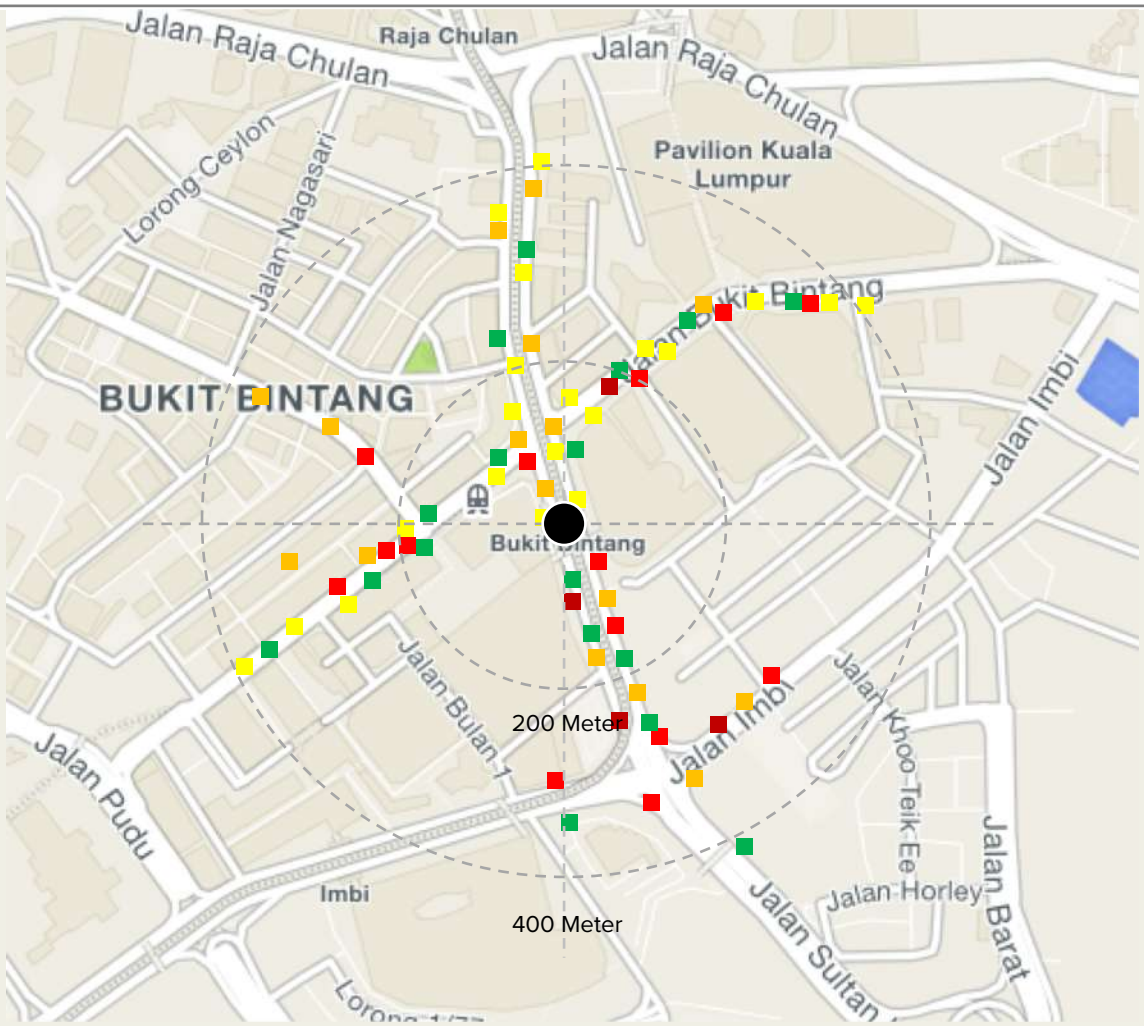


Figure 5: Problems Spots at Bukit Bintang LRT Station

The map shows 82 problem spots that need to be solved by the DBKL

Aspect	Problem Spots
Safety and security	10
Linkages	4
Maintenance	13
Disable facilities	32
Amenities	23
Total	**82**

Legend:	
	Transit Station
	Safety and Security Element
	Linkages
	Maintenance
	Disabled Facilities
	Amenities
	Radius Distance

Example : TRX MRT Station

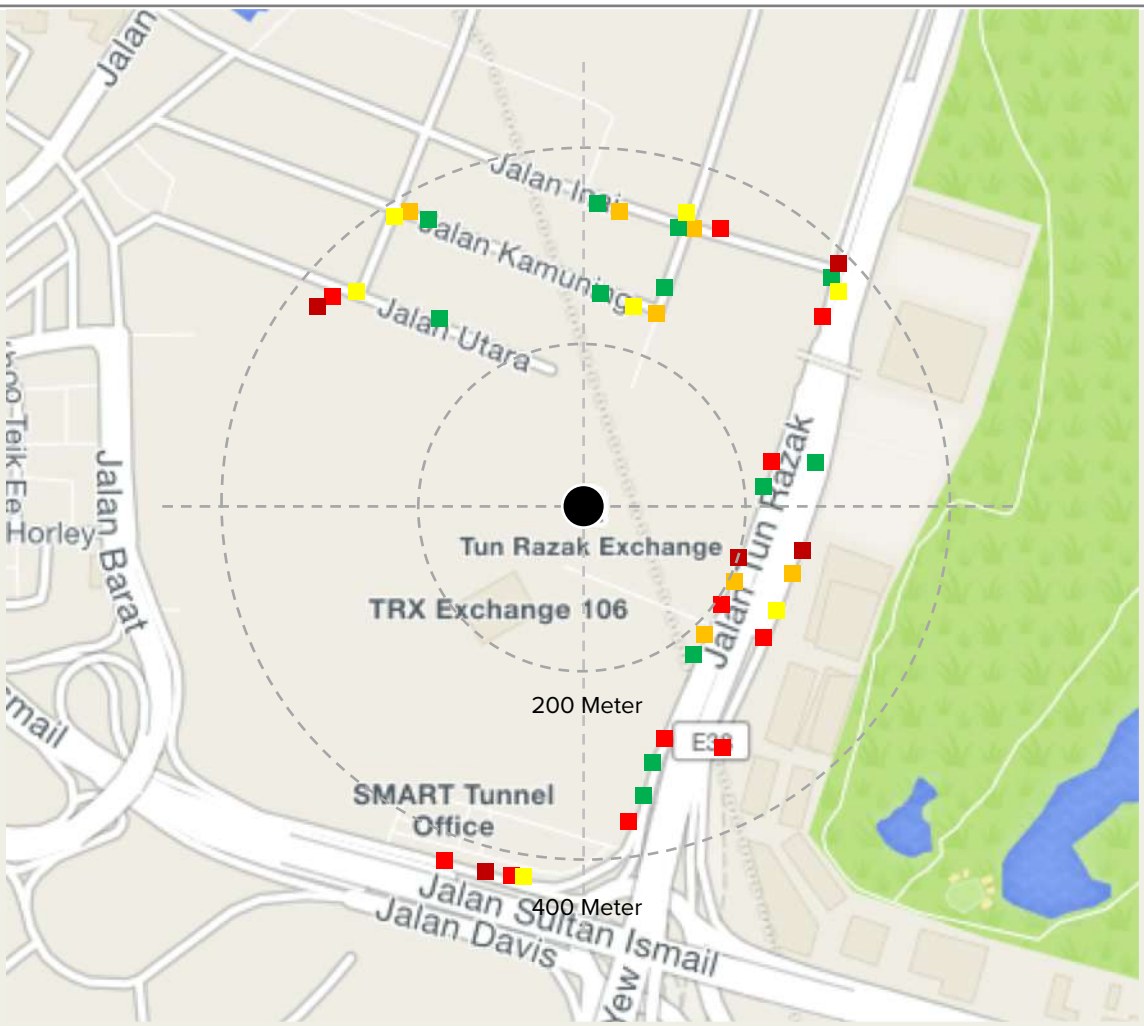


Fig. 6: Problems Spots at Tun Razak Exchange (TRX) MRT Station

The map shows 42 problem spots that need to be solved by the DBKL

Aspect	Problem Spots
Safety and security	11
Linkages	5
Maintenance	7
Disable facilities	7
Amenities	12
Total	**42**

Legend:	
●	Transit Station
■	Safety and Security Element
■	Linkages
■	Maintenance
■	Disabled Facilities
■	Amenities
◌	Radius Distance

Example : Merdeka MRT Station

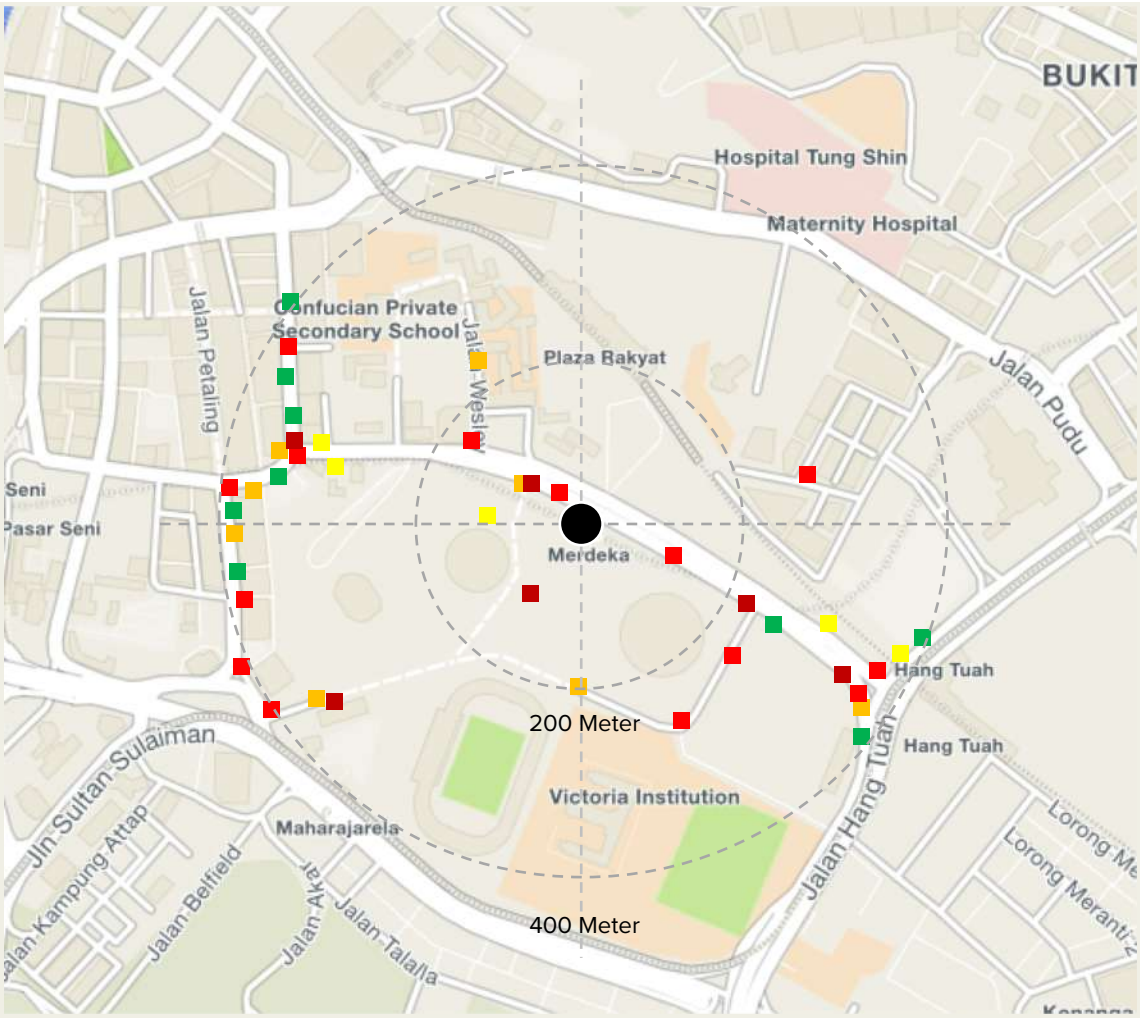


Fig. 7: Problems Spots at Merdeka MRT Station

The map shows 42 problem spots that need to be solved by the DBKL

Aspect	Problem Spots
Safety and security	14
Linkages	6
Maintenance	8
Disable facilities	5
Amenities	9
Total	**42**

Legend:	
●	Transit Station
■	Safety and Security Element
■	Linkages
■	Maintenance
■	Disabled Facilities
■	Amenities
◌	Radius Distance

Example : Imbi Monorail Station

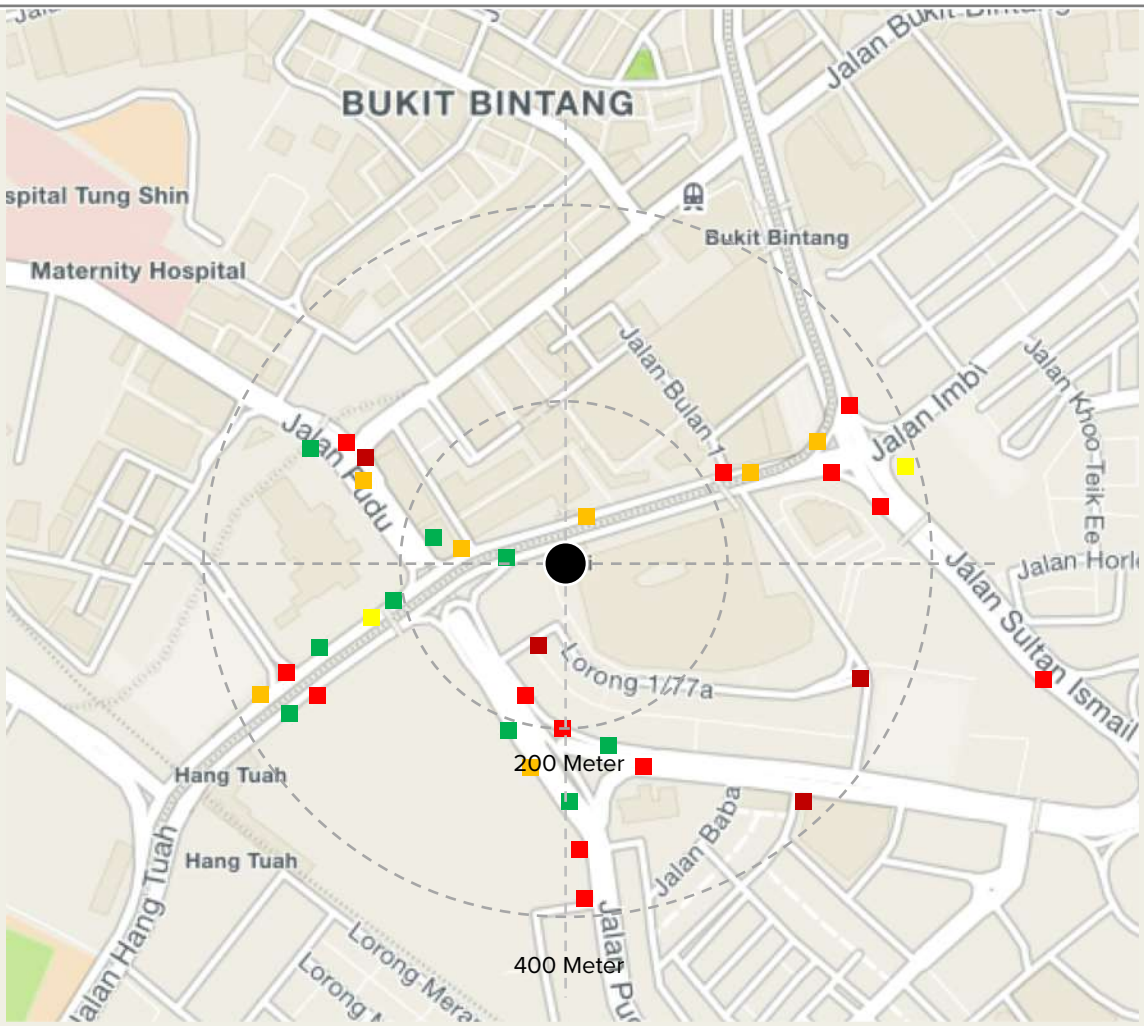


Fig. 8: Problems Spots at Imbi Monorail Station

The map shows 35 problem spots that need to be solved by the DBKL

Aspect	Problem Spots
Safety and security	13
Linkages	4
Maintenance	7
Disable facilities	2
Amenities	9
Total	**35**

Legend:	
●	Transit Station
■	Safety and Security Element
■	Linkages
■	Maintenance
■	Disabled Facilities
■	Amenities
◌	Radius Distance

Example : Maharajalela Monorail Station

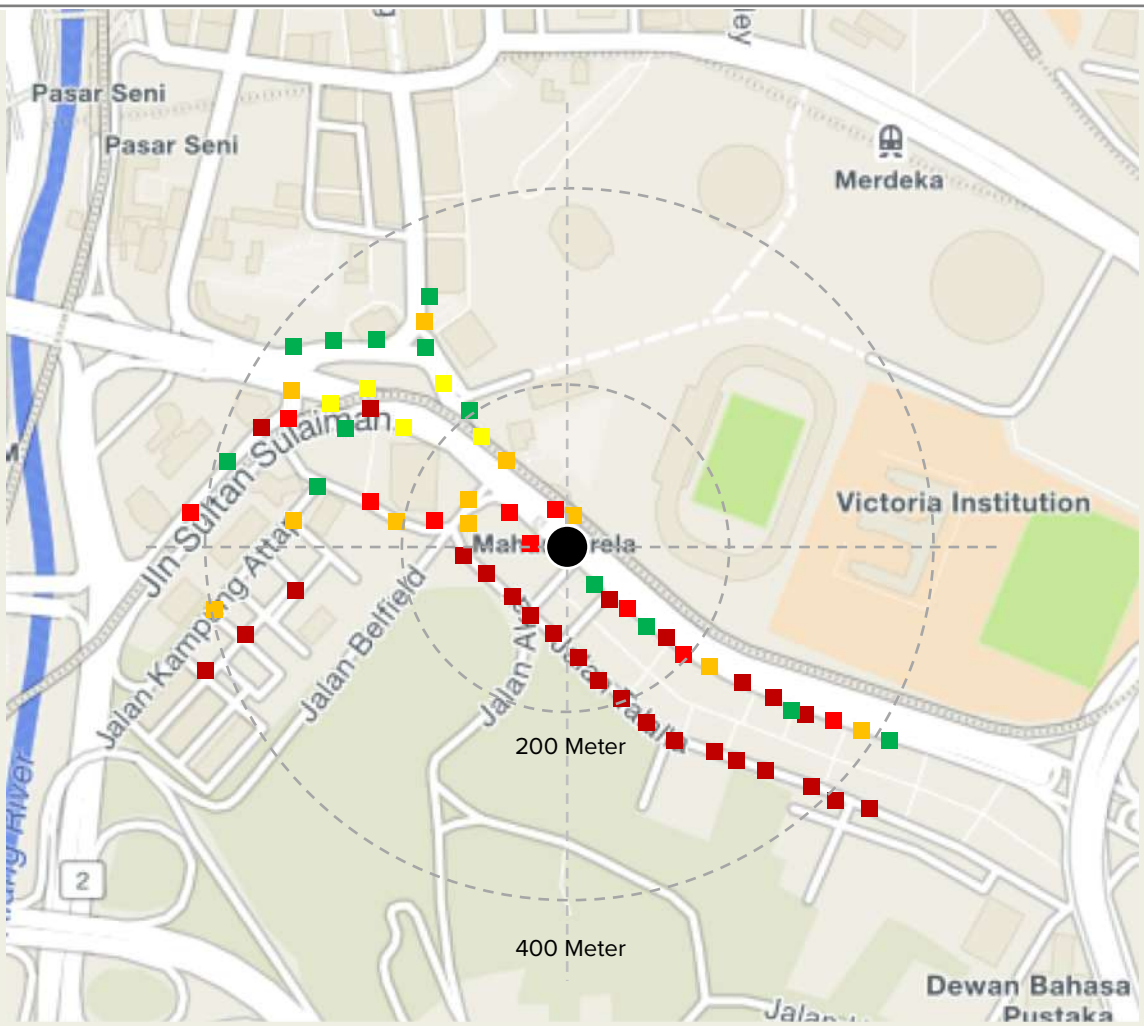


Fig. 9: Problems Spots at Maharajalela Monorail Station

The map shows 65 problem spots that need to be solved by the DBKL

Aspect	Problem Spots
Safety and security	10
Linkages	26
Maintenance	11
Disable facilities	5
Amenities	13
Total	**65**

Legend:	
●	Transit Station
■	Safety and Security Element
■	Linkages
■	Maintenance
■	Disabled Facilities
■	Amenities
◌	Radius Distance

Example : Masjid Jamek LRT Station

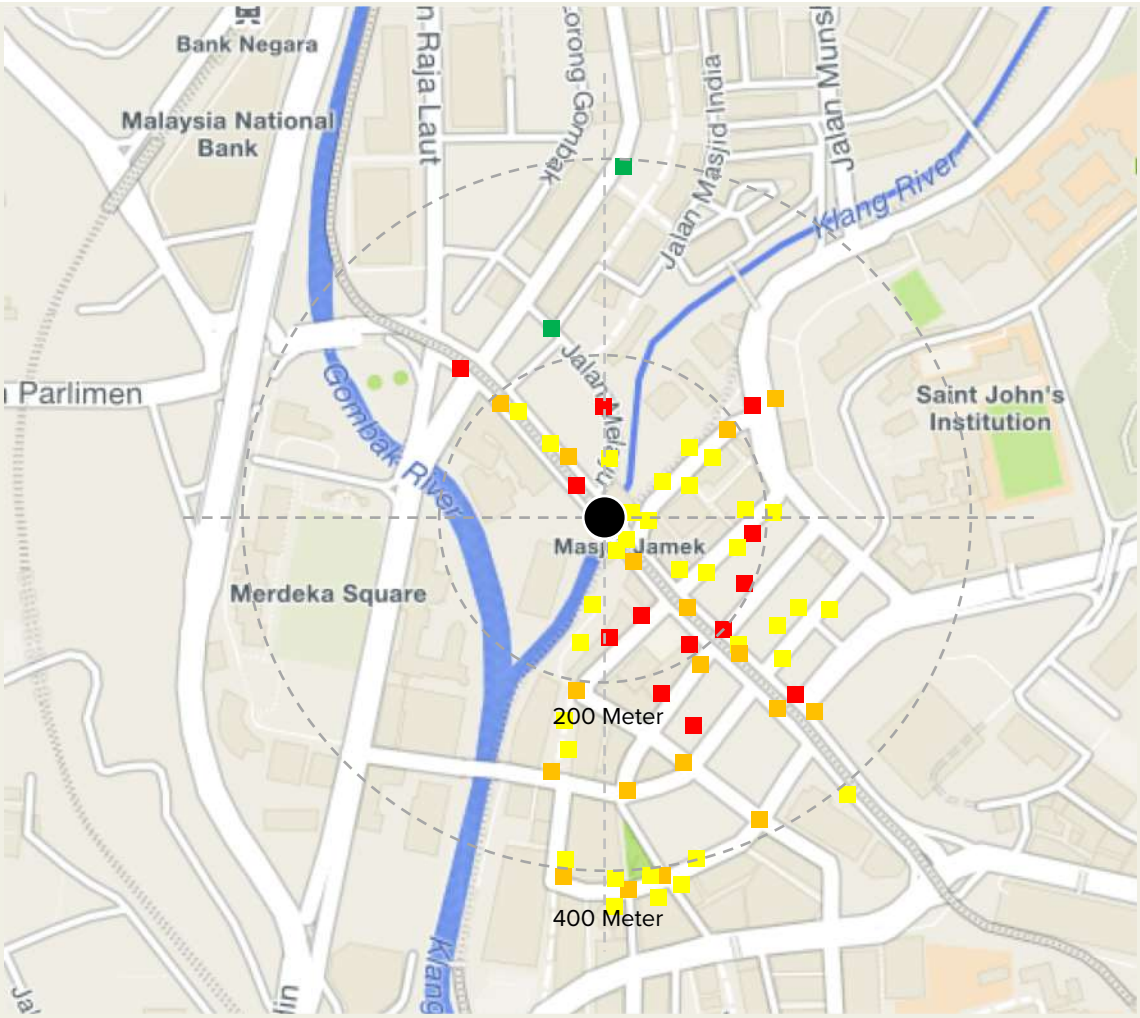


Fig. 10: Problems Spots at Masjid Jamek LRT Station

The map shows 75 problem spots that need to be solved by the DBKL

Aspect	Problem Spots
Safety and security	22
Linkages	-
Maintenance	15
Disable facilities	36
Amenities	2
Total	**75**

Legend:	
●	Transit Station
■	Safety and Security Element
■	Linkages
■	Maintenance
■	Disabled Facilities
■	Amenities
◌	Radius Distance

Example : Medan Tuanku LRT Station

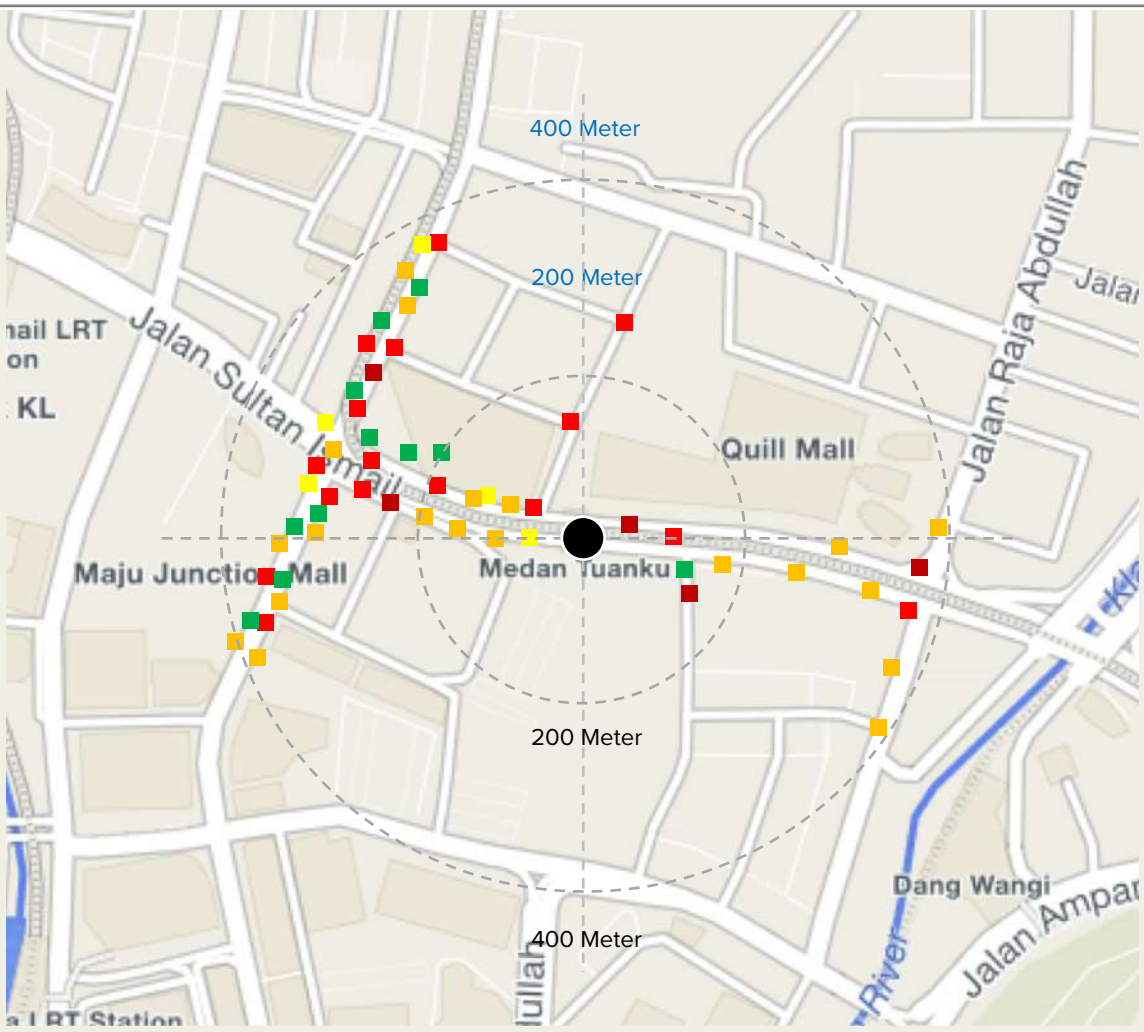


Fig. 11: Problems Spots at Medan Tuanku LRT Station

The map shows 57 problem spots that need to be solved by the DBKL

Aspect	Problem Spots
Safety and security	16
Linkages	5
Maintenance	20
Disable facilities	5
Amenities	11
Total	**57**

Legend:	
●	Transit Station
■	Safety and Security Element
■	Linkages
■	Maintenance
■	Disabled Facilities
■	Amenities
◌	Radius Distance

Example : Titiwangsa Monorail Station

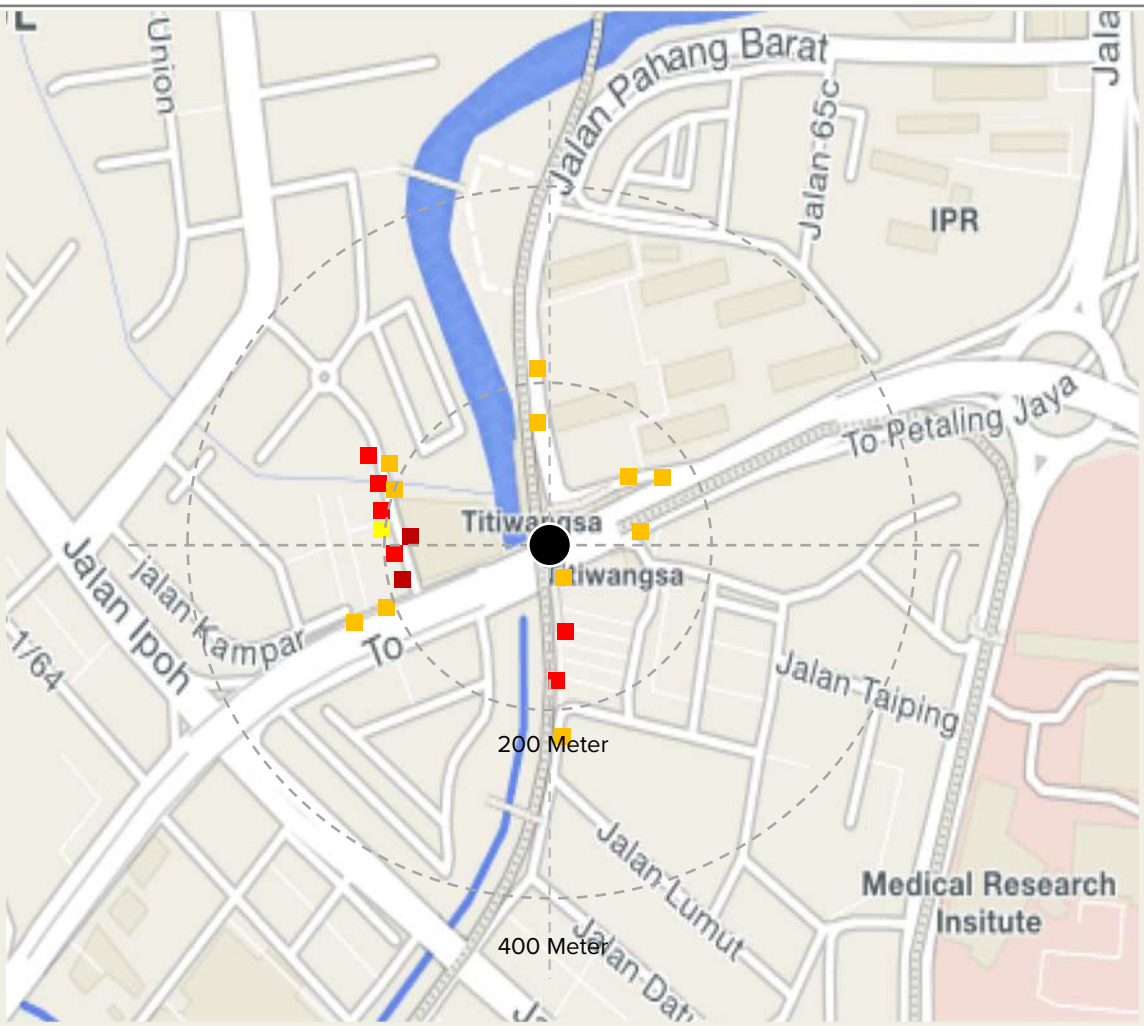


Fig. 12: Problems Spots at Titiwangsa Monorail Station

The map shows 18 problem spots that need to be solved by the DBKL

Aspect	Problem Spots
Safety and security	6
Linkages	2
Maintenance	9
Disable facilities	1
Amenities	-
Total	**18**

Legend:	
●	Transit Station
■	Safety and Security Element
■	Linkages
■	Maintenance
■	Disabled Facilities
○	Radius Distance

INITIATIVE 2:
Construct Elevated Pedestrian Expressways (EPEX) in Kuala Lumpur

Description:
Potentially, there are 7 locations where elevated pedestrian expressways (EPEX) may be constructed. Simply, EPEX is an elevated shared facilities for active mobility providing continuous, unobstructed, safe and comfortable passages to pedestrians and users of Personal Mobility Devices (e.g. e-scooter and hoverboard). These proposed EPEXs connect transit stations with important buildings/landmarks in and around the city center. The EPEX alignments represent routes with high pedestrian volume. The 7 identified express walkways may be duplicated at other locations in the future.

PROPOSED 7 LOCATIONS TO DEVELOP ELEVATED PEDESTRIAN EXPRESSWAY (EPEX)

01
Imbi transit station – Ampang Park

02
Titiwangsa Transit Station – KL Sentral

03
Sultan Ismail Transit – OUM

04
Putra Transit Station - PWTC

05
Universiti Transit Station – Universiti Malaya

06
Masjid Jamek Transit Station – Jalan Raja

07
Pasar Seni Transit Station – Wisma Tun Sambathan

DETAILED DEVELOPMENT 1:

Imbi – Ampang EPEX (Elevated Pedestrian Expressway)

Description:

The Imbi-Jalan Sultan Ismail-Jalan P. Ramlee-Jalan Ampang corridor is a corridor with high pedestrian volume in Kuala Lumpur CBD, even after office hours. The corridor is densely dotted with hotels popular with international tourists, entertainment centers, eateries and corporate buildings. Due to high demand of active mobility, an elevated pedestrian expressway is a warranted solution to increasing pedestrian comfort and safety as well as alleviate the image of Kuala Lumpur.

Justification

- Provide continuous, unobstructed, safe and comfortable passages to pedestrians and PMD users
- Avoid conflicts with motorized vehicles and other physical obstructions on the ground

Alignment and Distance

- 4 km length starting from Imbi Monorail Station to Ampang (Intermark Building)
- Connecting Jalan. Imbi, Jalan Sultan Ismail and Jalan. Ampang via Jalan P. Ramlee

Development Component

- Elevated pedestrian expressway
- With dedicated lane for e-scooters or PMD
- Include pedestrian amenities e.g. benches and water fountain
- CCTVs installed to ensure user safety and security

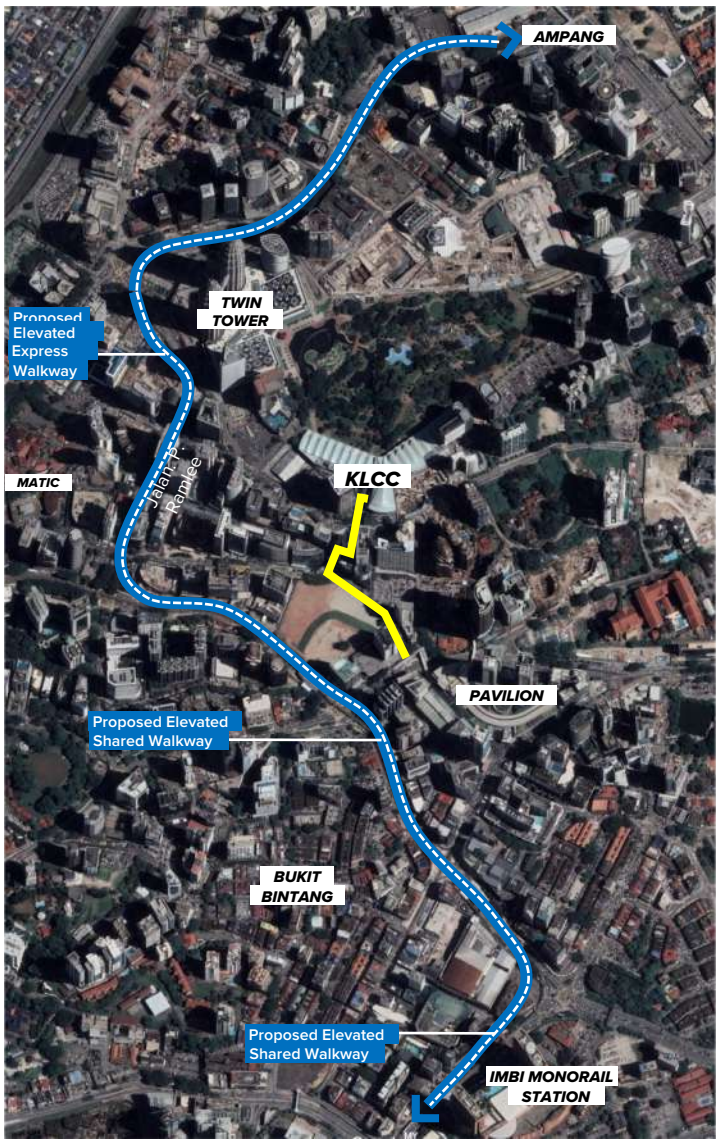


Fig. 13: Concept Map of Proposed Imbi – Ampang Park Pedestrian Expressway/Elevated Shared Walkway

Proposed Development Components

The figure below illustrates detailed development components of Imbi – Ampang EPEX.

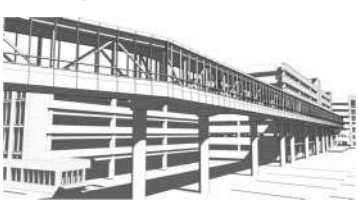
Proposed Elevated Pedestrian Mall

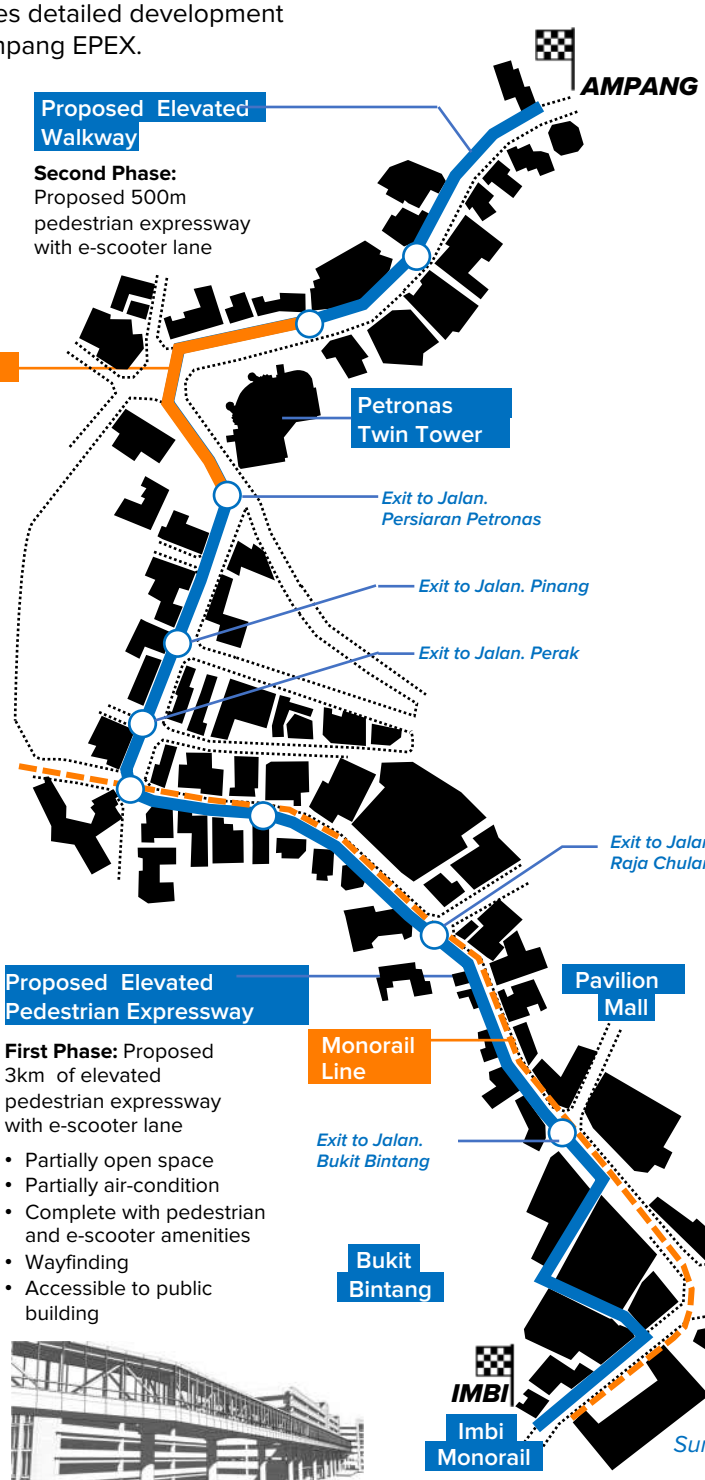
Proposed 250m vista lane of elevated open space pedestrian mall

Proposed Elevated Pedestrian Expressway

First Phase: Proposed 3km of elevated pedestrian expressway with e-scooter lane

- Partially open space
- Partially air-condition
- Complete with pedestrian and e-scooter amenities
- Wayfinding
- Accessible to public building





Facilities and Amenities along The Imbi-Ampang Park EPEX

The following shows examples of facilities and amenities to be provided along the pedestrian expressway. These facilities and amenities provide comfort and convenience while ensuring safety and security to the users.

1. CCTV



- HD CCTVs along the walkway at strategic location

2. Wayfinding



- Smart digital signboards for wayfinding

3. Charging Station



- Electric charging station for e-scooters and other PMD

4. Signage



- Adequate and appropriately placed signages along the walkway

5. Wall Decoration



- Wall decorations and city arts along the walkway with community stories

6. Drinking Station / Refill Station



- Resting areas with benches and drinking station/vending machines

DETAILED DEVELOPMENT 2:
Other Identified Areas

Description:
Apart from Imbi-Ampang EPEX and Pavilion-TRX EPEX, there are 6 other elevated pedestrian expressways proposed for Kuala Lumpur. The selection of these EPEXs are made due to their concentration of pedestrian volumes as well as for the opportunity of providing seamless connectivity between high demand points. The provision of these EPEXs will reduce walking distance and enhance walking comfort and safety. These EPEXs also solve the Last-Mile connectivity issues thus encouraging more people to engage in walking as their commuting solution.

1. Titiwangsa Transit Station – KL General Hospital

Fig. 14: Elevated Pedestrian Expressway From Titiwangsa Transit Station to KL General Hospital

Alignment:

Connecting Titiwangsa Station to Hospital Kuala Lumpur

Justification:

Provide an alternative route to access Kuala Lumpur General Hospital (KLGH) by walking other than the existing Chow Kit Station--KLGH walkway.

Distance:

370 meter

Infrastructure:

Elevated Pedestrian Expressway (EPEX)

2. Sultan Ismail Transit Station – OUM

Fig. 15: Elevated Pedestrian Expressway From Sultan Ismail Transit Station to OUM

Alignment:

Connecting Sultan Ismail Station to Open University Malaysia (OUM)

Justification:

Currently OUM is inaccessible by walking from the Sultan Ismail Transit Station. This EPEX encourages people to take rail transport to reach OUM and the surrounding areas.

Distance:

250 meter

Infrastructure:

EPEX

3. Putra KTM Komuter Station – PWTC

Fig. 16: Elevated Pedestrian Expressway From Putra KTM Komuter Station to PWTC

Alignment:

Connecting Putra KTM Komuter Station to PWTC and Sunway Putra Mall

Justification:

PWTC is a popular site for major events like the annual International Book Fair. People using KTM Komuter stopping at the Putra Station face serious safety issues to reach PWTC.

Distance:

100 meter

Infrastructure:

EPEX

4. Universiti Transit Station - Universiti Malaya

Fig. 17: Elevated Pedestrian Expressway From Universiti Transit Station to UM

Alignment:

Connecting Universiti Station crossing to Universiti Malaya

Justification:

Students, employees and visitors to Universiti Malaya have to brace potential accident hazards by crossing high traffic volume roads to reach UM from the Universiti Transit Station.

Distance:

400 meter

Infrastructure:

Elevated shared walkway + E-scooters

5. Masjid Jamek Transit Station – Jalan Raja

Fig. 18: Elevated Pedestrian Expressway From Masjid Jamek Transit Station to Jalan Raja

Alignment:

Connecting Masjid Jamek Station to Jalan Raja

Justification:

Visitors and tourists to Dataran Merdeka and Sultan Abdul Samad Building can avoid numerous small junctions while enjoying the view of the Klang River from above

Distance:

270 meter

Infrastructure:

Elevated shared walkway + E-scooters

6. Pasar Seni Transit Station – Wisma Tun Sambathan

Fig. 19: Elevated Pedestrian Expressway From Pasar Seni Transit Station to Wisma Tun Sambanthan

Alignment:

Connecting Pasar Seni Station crossing to Wisma Tun Sambathan

Justification:

Connecting Pasar Seni Station to Wisma Tun Sambathan will make the building and the surrounding areas accessible by 3 rail services (i.e. LRT, MRT and Monorail) from the existing one service only (i.e. Monorail)

Distance:

300 meter

Infrastructure:

Elevated shared walkway + E-scooters

INITIATIVE 3:
Improve Existing Walkways

Description:
Constructing elevated pedestrian expressways (EPEX) cannot be the only solution to improve walkability in Kuala Lumpur. Where EPEX is not feasible due to cost, land constraints or unjustifiable pedestrian volume, improving existing at-grade walkways are a more economical and faster solution through a well-planned and well-executed retrofitting exercises. Potential areas where existing walkways can be improved and/or upgraded are listed here.

PROPOSED 14 EXISTING LOCATIONS FOR IMPROVEMENT	01 Imbi – Ampang Park	02 Transit Station Bangsar – Bangsar Village
03 Pavilion – Tun Razak Exchange (TRX)	04 Taxi Stand TBS – Transit Station TBS	05 MRT TTDI – TTDI Market
06 Jalan Tun Mohd Fuad – TTDI Plaza (Jalan Wan Kadir 5)	07 Bus Stand T408 – UCSI University Taman Connaught	08 Masjid Al-Najihin – Sek. Men. Agama Majlis Agama Islam Wilayah Persekutuan
09 Jalan Sri Permaisuri 6, Bandar Sri Pemaisuri	10 Transit Station Kampung Batu – T120 Bus Station, Tmn Batu Permai	11 McDonald's Jalan Pahang – KPJ Tawakkal Hospital
12 KL2140 Bus Station (Pantai Dalam) – Sek. Ren. Agama Ibnu Abbas	13 Bulatan Bandaraya (Bank Negara – Royal Selangor Club)	14 Transit Station Maharajalela – Jalan Kampung Attap - KTM Station

DETAILED DEVELOPMENT 1:
Improving Imbi – Ampang Existing Walkway

Description:
This corridor is the same alignment where the Imbi-Ampang EPEX overlaps above. This corridor is the location of many popular point-of-interests in the KL CBD. Both locals and tourists frequent these locations for their diversity of food, shopping experience, entertainments and cultures.

Justification

- Once users exit the Imbi-Ampang EPEX, they will need to continue their final journey along at-grade walkways. Comfort and safety along these at-grade walkway must be similarly guaranteed.

Alignment and Distance

- 3.4 km length starting from Imbi Monorail Station to Ampang Park
- Passing Jalan. Imbi, Jalan Sultan Ismail, and Jalan. Ampang via Jalan P. Ramlee

Development Component:

- Upgrading of pavement surface
- Improving junctions to set priority to pedestrians
- Installing appropriate signages and signals at junctions
- Improve landscaping to provide natural shades
- Increase provision of pedestrian facilities and amenities e.g. benches

Fig. 20: Concept Map of Proposed Improving Existing Walkway Imbi Monorail Station to Ampang Park LRT Station

Existing Conditions

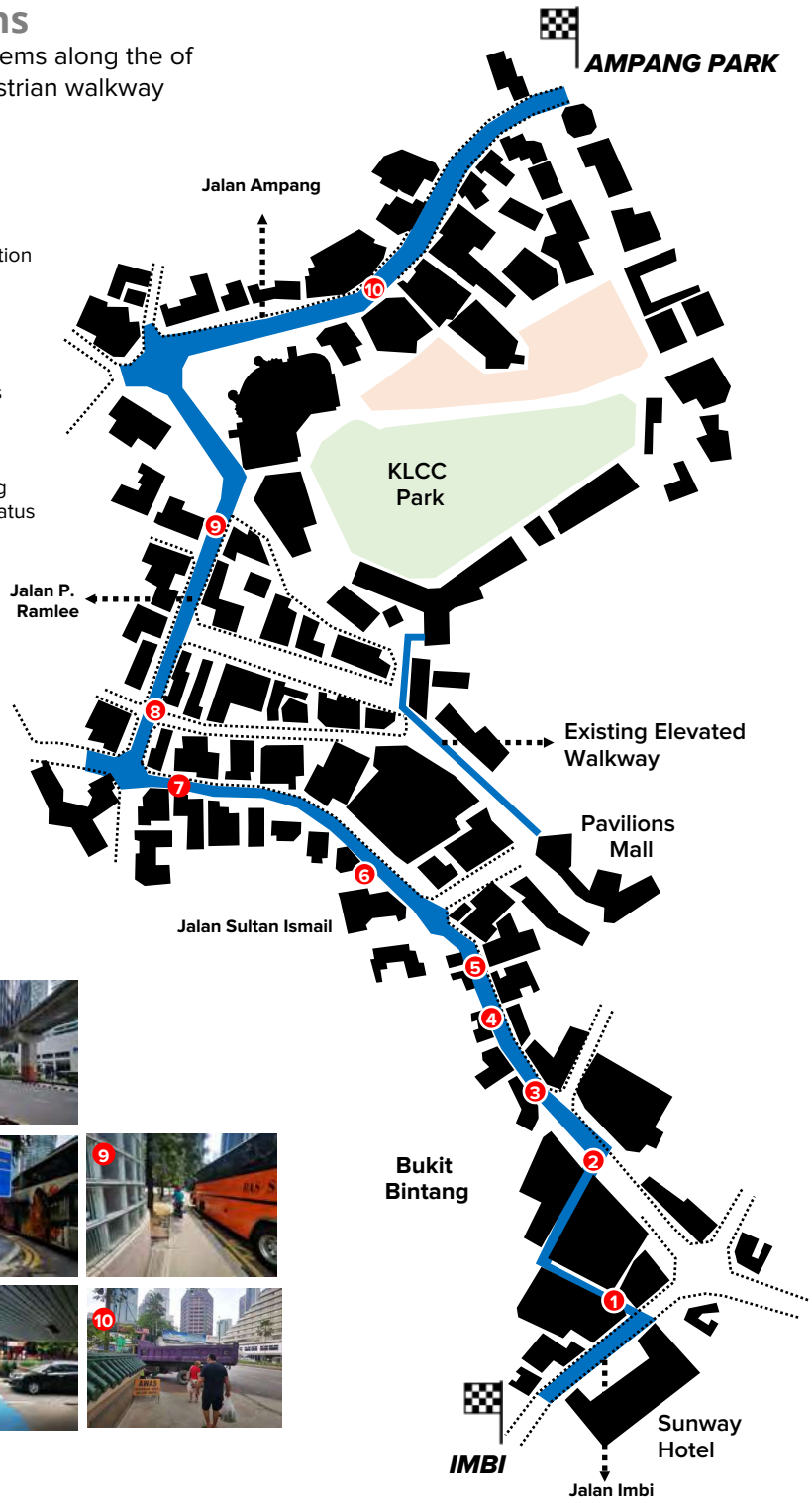
The map shows major problems along the of existing Imbi-Ampang pedestrian walkway

1. No Crossing Facilities
2. Not disabled-friendly
3. Landscape as physical obstruction
4. Illegal parking at junction
5. Unshaded walkways
6. Absence of ramps and bollards
7. Hazardous signage
8. Absence of pedestrian crossing signs and traffic calming apparatus
9. Motorcycle Encroachment
10. Conflict with heavy vehicles



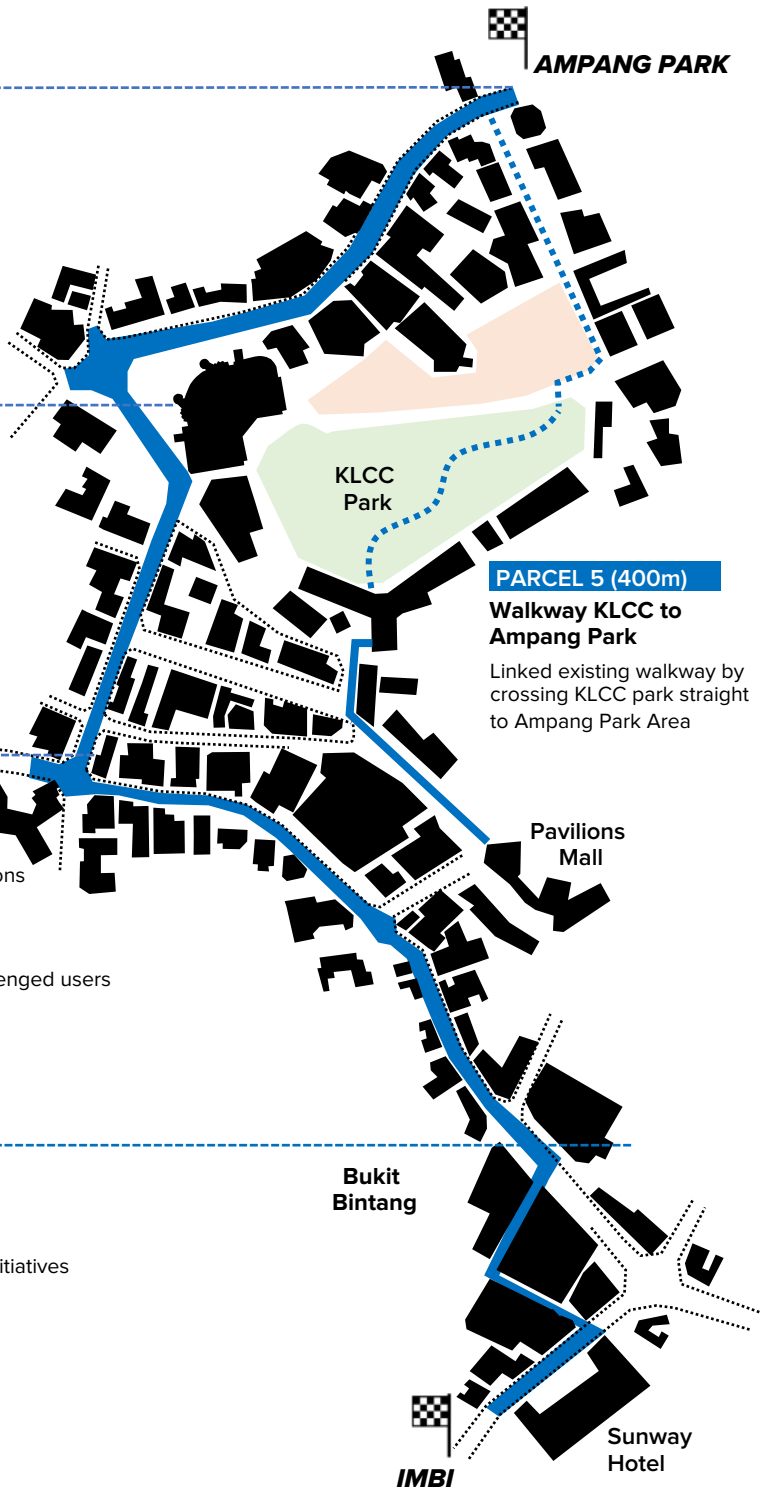






Detailed Development Components

As the Imbi-Ampang walkway spans over more than 1 km, it is desirable to divide the walkway improvement initiative into several parcels. The following figures show the 5 parcels that constitute the entire Imbi-Ampang pedestrian walkway corridor. Each parcel is distinct in its problems and land use characteristics.



PARCEL 1 (1000 m)

LRT Ampang to KLCC

- Improve safety at crossing area
- Install anti climbing fence
- Improve uneven walkway surface
- Provide dedicated e-scooters lane
- Provide smart wayfinding along route
- Remove physical obstructions
- Prevent illegal entrance of motorcycles

PARCEL 2 (800m)

KLCC to Jalan P. Ramlee

- Provision of covered walkway
- Improve safety at crossing area
- Provide dedicated e-scooters lane
- Provide smart wayfinding
- Implement traffic calming at junctions

PARCEL 3 (1500m)

Jalan Sultan Ismail to Jalan Junction Raja Chulan

- Improve safety at crossing area
- Reprioritising user hierarchies at junctions
- Improve uneven walkway surface
- Provide dedicated e-scooters lane
- Provide smart wayfinding
- Improve access for the physically-challenged users

PARCEL 4 (600m)

Junction Jalan Raja Chulan to Imbi Monorail Station

- Improve safety at crossing area
- Improve back lane with placemaking initiatives
- Improve uneven walkway surface
- Provide dedicated e-scooters lane
- Provide smart wayfinding

PARCEL 5 (400m)

Walkway KLCC to Ampang Park

Linked existing walkway by crossing KLCC park straight to Ampang Park Area

DETAILED DEVELOPMENT 2:

Improving Existing Walkway from Bangsar LRT to Bangsar Village

Description:
Located close to the KL CBD, Bangsar experiences many of the same problems as the CBD with regard to the quality – comfort, safety and connectivity – of its pedestrian walkway network. Here, systematic approach to solving Bangsar's needs for walking and cycling infrastructures are discussed in detail.

Justification

- To enhance mobility from transit station Bangsar to Bangsar Village as well as accommodating the needs of current users

Alignment and Distant

- 1.2 km length starting from Station LRT Bangsar to Bangsar Village
- Involving Jalan Maarof and Lorong Maarof

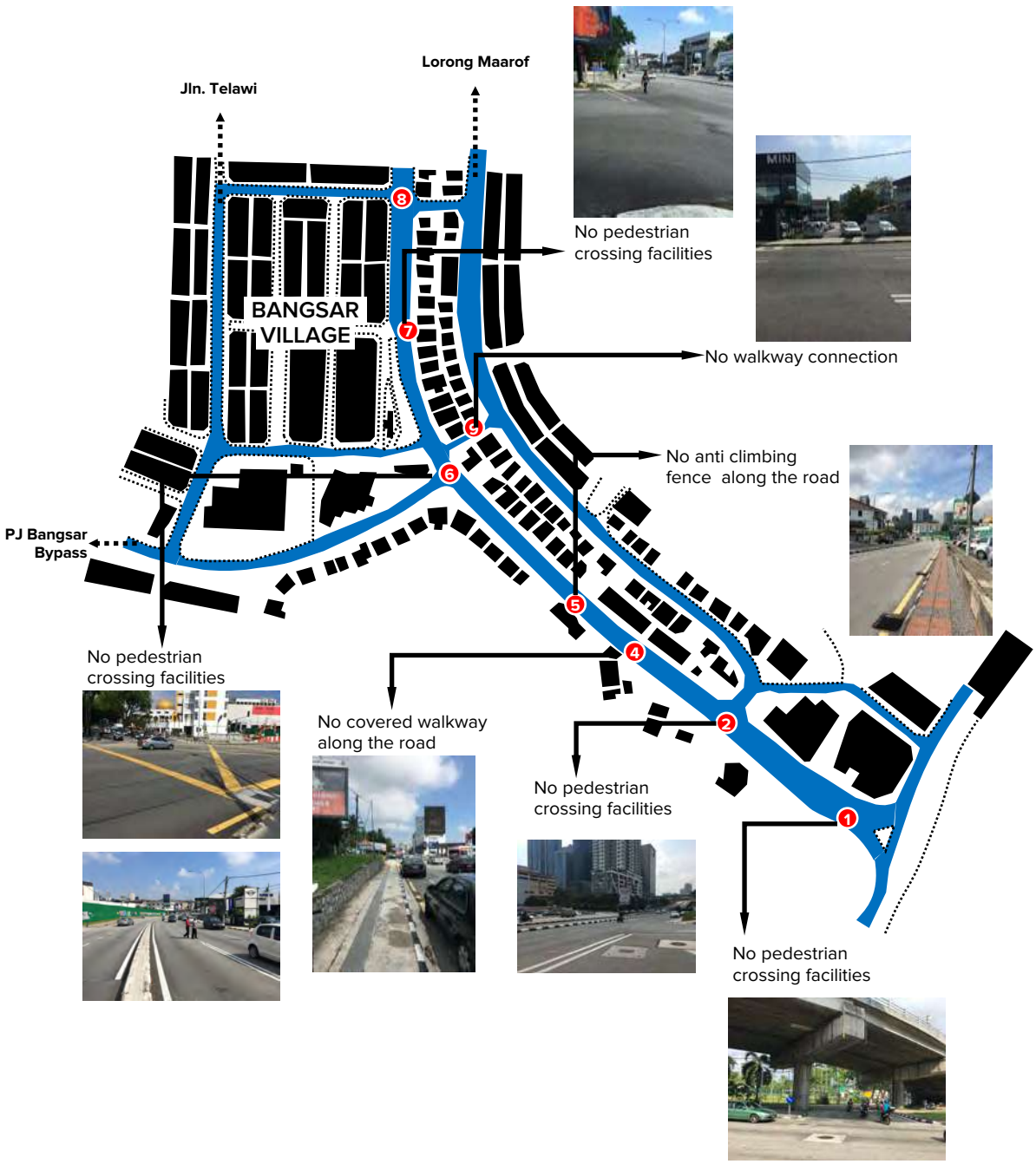
Development Component:

- Covered walkway
- Crossing facilities
- Dedicated with special lane for e-scooters
- Amenities
- Safety and security

Fig. 21: Concept Map of Proposed Improving Existing Walkway From Bangsar LRT Station to Bangsar Village

Existing Conditions

The map shows the major problems along the Jalan Maarof starting from Bangsar LRT Station to Bangsar Village



Detailed Development Components

The figure below shows the elements that need to be developed along the Jalan Maarof to enhance level of comfort and safety for pedestrians.

A Enhance safety level at pedestrian crossing points by provision of zebra crossing and traffic light

D Enhance pedestrian connectivity between Jalan Maarof and Lorong Maarof by back lane connection

C Improve level of comfort on existing walkway facilities by developed walkshed as well as install railing along the route

C Provide dedicated e-scooter lane on the existing walkway

B Enhance safety level at pedestrian crossing points by provision pedestrian bridge

DETAILED DEVELOPMENT 3:

Pavilion – Tun Razak Exchange (TRX)

Description:
Tun Razak Exchange (TRX) is a new, upcoming business , commercial and transportation hubs in KL CBD. Due to its proximity to Pavilion Mall, there is an expected high concentration of pedestrian activities between these two points (i.e. TRX and Pavilion). Hence, the Pavilion-TRX Walkway is an answer to improve walking connectivity for the pedestrians.

Justification

- To connect two city icons in the city center (Pavilion and TRX)

Alignment and Distance

- 600 m length Pavilion Mall to TRX
- Passing through Jalan. Gading and Jalan Utara

Development Component

- Dedicated walkway with special lane for e-scooters
- With pedestrian facilities, amenities and wayfinding
- Safety and security guaranteed

Fig. 22: Concept Map of Proposed Improving Existing Walkway From Pavillion to Tun Razak Exchange MRT Station

DETAILED DEVELOPMENT 4:
Other Identified Areas

Description:
Besides the Imbi-Ampang and the Bangsar LRT-Bangsar Village corridors, there are 11 other pedestrian walkway corridors that can be redeveloped and improved upon. These 11 corridors are corridors with high demand for walking either as First-Mile or Last-Mile components. The treatment of designing and planning for upgrading the walkways can follow the same methodological approach as the Imbi-Ampang and Bangsar LRT-Bangsar Village corridors discussed previously. The 11 walkway corridors identified for upgrading are given below:

1. TBS Taxi Stand - TBS Transit Station

Fig. 23: Allignment of Proposed Improving Existing Walkway From TBS LRT Station to Taxi Stand TBS

Alignment:

Connecting Taxi Stand TBS to Transit Station TBS

Justification:

The desired walkway line has been determined by the users.

Distance:

20 meter

Infrastructure:

Shaded walkway

2. TTDI MRT Station - TTDI Market

Fig. 24: Allignment of Proposed Improving Existing Walkway From TTDI MRT Station to TTDI Market

Alignment:

Connecting MRT TTDI Station to TTDI Market

Justification:

High pedestrian volume

Distance:

400 meter

Infrastructure:

Shaded walkway

3. Jalan Tun Mohd Fuad - TTDI Plaza (Jalan Wan Kadir 5)

Fig. 25: Allignment of Proposed Improving Existing Walkway From Jalan Tun Mohd Fuad to TTDI Plaza

Alignment:

Along Jalan Wan Kadir 5

Justification:

Broken tiles and physical obstructions along important pedestrian route in TTDI

Distance:

250 meter

Infrastructure:

Paved pedestrian walkway

4. Bus Stand T408 - UCSI University (North Wing)

Fig. 26: Allignment of Proposed Improving Existing Walkway From Bus Stand T408 to UCSI University

Alignment:

Connecting UCSI University to Bus Stand T408

Justification:

High volume of pedestrian consisting of college students

Distance:

450 meter

Infrastructure:

Wider walkway with shades

5. Masjid Al-Najihin - SMA Agama Islam Wilayah Persekutuan

Fig. 27: Allignment of Proposed Improving Existing Walkway From Masjid Al-Najihin to SMA Agama Islam Wilayah

Alignment:

Connecting Masjid Al-Najihin to SMA Agama Islam Wilayah Persekutuan

Justification:

High volume of local pedestrians accessing local shops and schools

Distance:

440 meter

Infrastructure:

Construct walkway to improve connectivity to existing paved walkway

6. Jalan Sri Permaisuri 6, Bandar Sri Permaisuri

Fig. 28: Allignment of Proposed Improving Existing Walkway Along Jalan Sri Permaisuri 6

Alignment:

Along sections of Jalan Sri Permaisuri 6

Justification:

There are significant discontinuity of pedestrian walkway

Distance:

800 meter

Infrastructure:

Construct walkway to improve connectivity to existing paved walkway

7. Kampung Batu Transit Station - T120 Bus Station

Fig. 29: Allignment of Proposed Improving Existing Walkway From Kampung Batu KTM Station to Bus Stand T120

Alignment:

T120 bus stand to Kampung Batu KTM Komuter Station

Justification:

Connecting residences of apartments/flats to bus and KTM Komuter stations

Distance:

350 meter

Infrastructure:

Shaded, paved walkway

8. McDonald's Jalan Pahang - KPJ Tawakkal Hospital

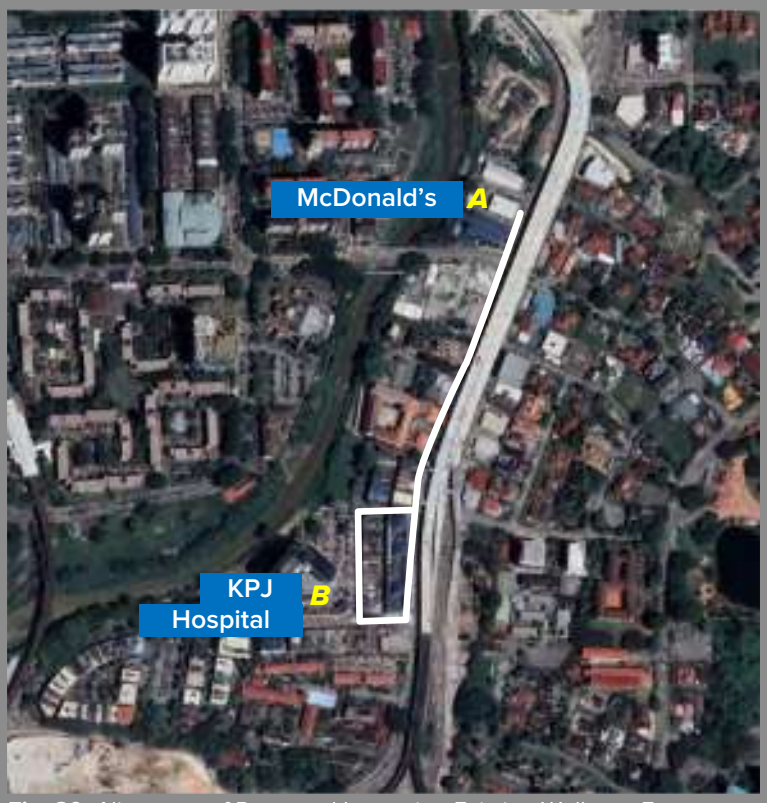


Fig. 30: Alignment of Proposed Improving Existing Walkway From McDonald's and KPJ Hospital

Alignment:

Along the path connecting McDonald's and KPJ Tawakkal Hospital

Justification:

Visitors to Tawakkal Hospital are not adequately protected from high traffic volume

Distance:

600 meter

Infrastructure:

Shaded, paved walkway

9. KL2140 Bus Stop - Sek. Rendah Agama Ibnu Abbas

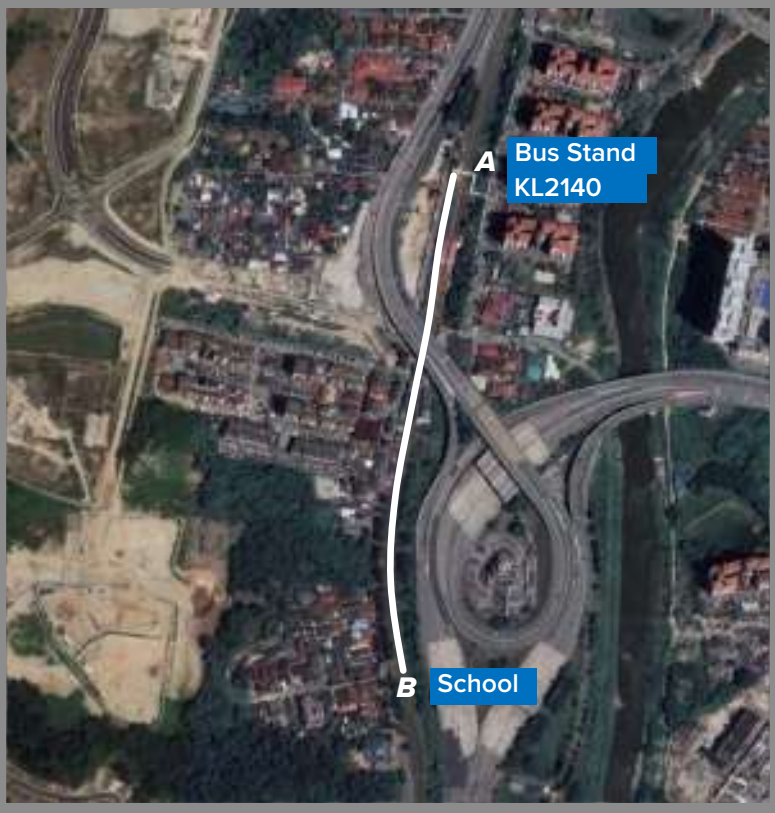


Fig. 31: Allignment of Proposed Improving Existing Walkway From Bus Stand KL2140 to School

Alignment:

KL2140 bus stop to Sek. Rendah Agama Ibnu Abbas and Community Health Centre

Justification:

Street vendors on walkway forcing pedestrian to encroach into roadways

Distance:

300 meter

Infrastructure:

Shaded, paved walkway cleared of street vendors

10. Bulatan Bandaraya (Bank Negara) - Royal Selangor Club

Alignment:

Connecting the Royal Selangor Club with Bank Kerjasama Rakyat HQ and Bank Negara

Justification:

No existing proper pedestrian crossing facilities creating critical safety issues

Distance:

400 meter

Infrastructure:

Paved, dedicated walkway

Fig. 32: Allignment of Proposed Improving Existing Walkway From Bank Negara to Royal Selangor

11. Maharajalela Monorail Station - Jalan Kg. Attap Pedestrian Bridge

Alignment:

Along existing walkway from Maharajalela Station to Pedestrian Bridge

Justification:

Safety is compromised at cross junctions along existing walkway

Distance:

600 meter

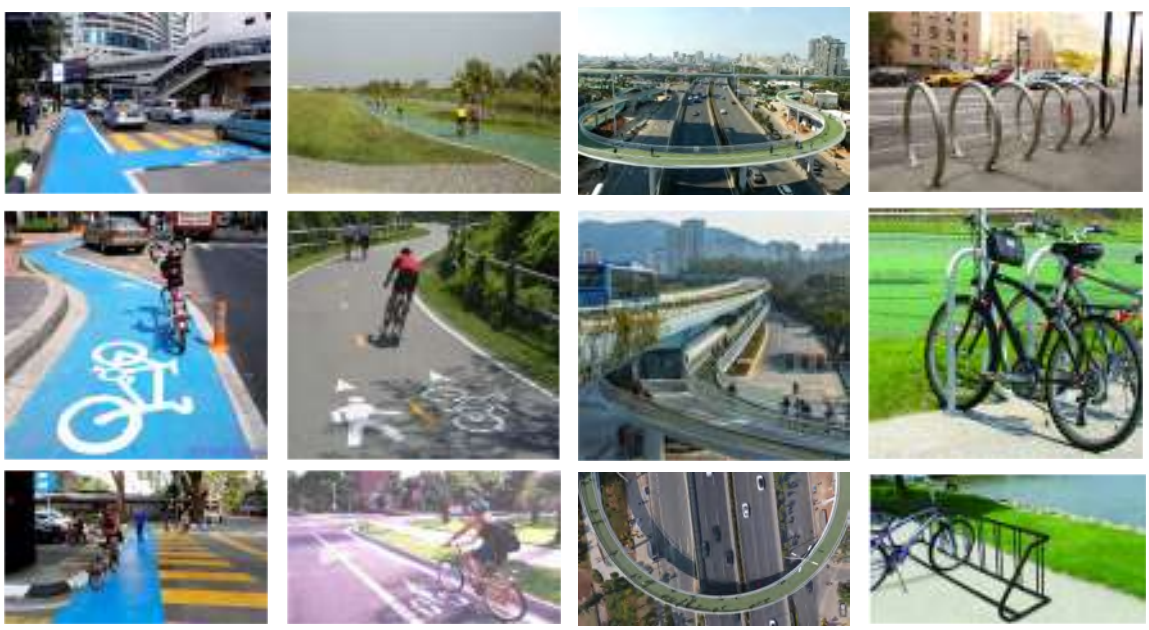
Infrastructure:

Improved cross-junctions

Fig. 33: Allignment of Proposed Improving Existing Walkway From Monorail Maharajalela to Pedestrian Bridge

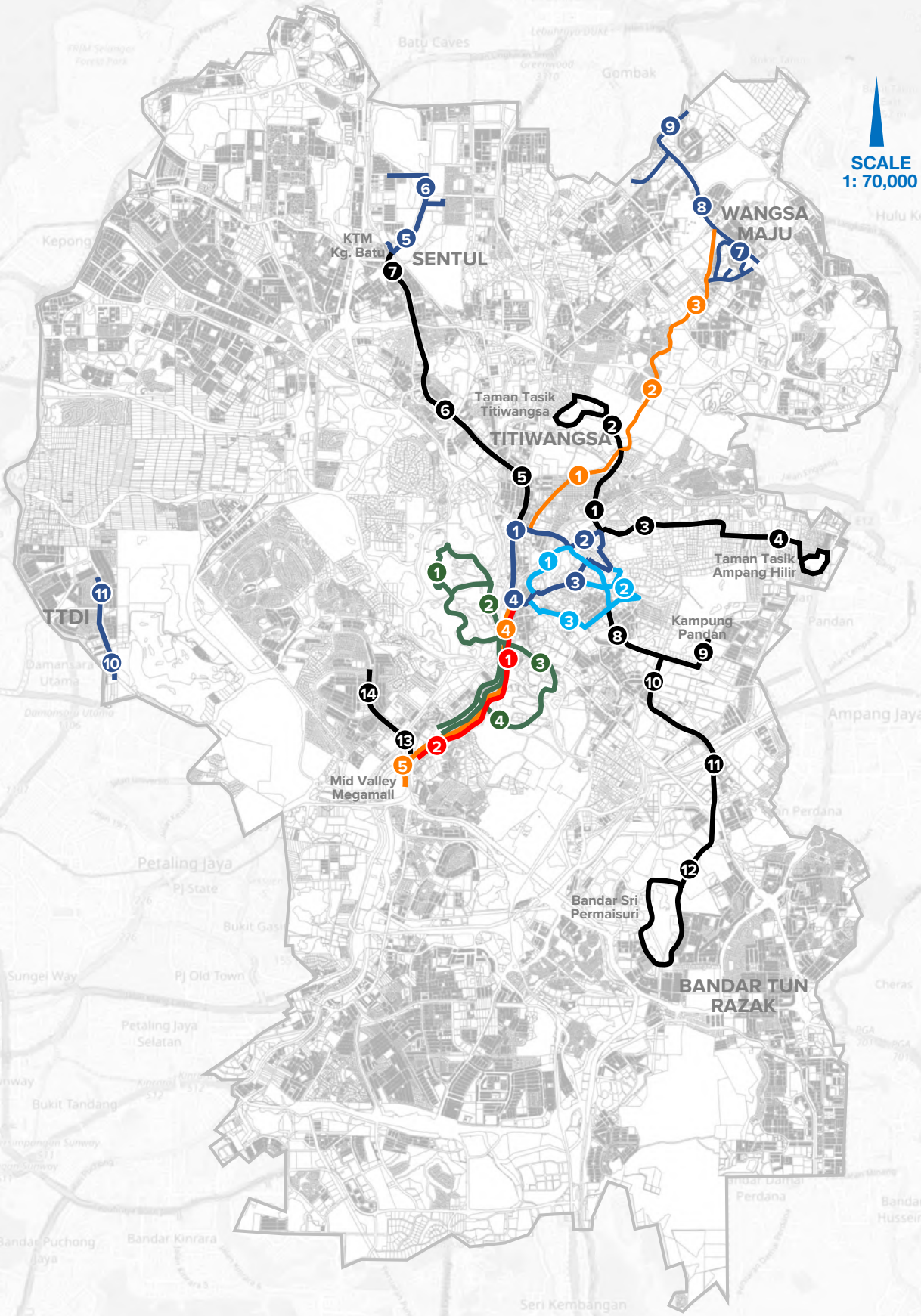
INITIATIVE 4:
Expand and Develop Cycling Lane Infrastructures and Facilities

Description:
Cycling is another form of active mobility besides walking. Together with users of Personal Mobility Devices (PMD), cycling and walking contribute towards achieving green mobility initiatives to lower carbon emission. Kuala Lumpur with its Low Carbon Society Blueprint has identified cycling as one of its strategic actions which needs to be encouraged. In this section, this masterplan proposes several strategies to further develop participation in cycling, not only as a form of recreation, but more importantly as a commuting mode. Towards this end, attentions are given to ensuring safety and comfort of cyclists as well as ensuring adequate provision of infrastructures and supporting facilities for cyclists.



Development 01	Development 02	Development 03	Development 04
To Expand Existing Cycling Blue Lane in City Center	To develop recreational cycling lane connected with existing lane to improve linkages	To develop commuting cycling lane connecting suburban residential areas to the city center	To facilitate the existing and future cycling activities with provision of cycling racks at the transit station and main public building

The following map shows the development of existing and proposed cycling lane in Kuala Lumpur.



Map 5-10: **Development of Existing and Proposed Cycling Lane in Kuala Lumpur**

Legend:

Existing Blue Lane (Loop)

Existing Cycling Lane Kg. Batu

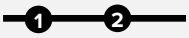
Existing Cycling Lane Wangsamaju

Existing Cycling Lane TTDI

Commited Cycling Lane Sungai Bunus

Existing Cycling Lane Sungai Klang

Proposed Expansion Cycling Lane in City Centre

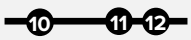


Proposed Expansion Cycling Lane Titiwangsa to City Center

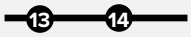
Proposed Expansion Cycling Lane Ampang to City Center

Proposed Expansion Cycling Lane Sentul to City Center

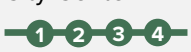
Proposed Expansion Cycling Lane Pandan to City Center



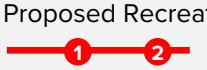
Proposed Expansion Cycling Lane Bandar Permaisuri to City Center



Proposed Expansion Cycling Lane Bangsar to City Center



Proposed Recreational Cycling Lane



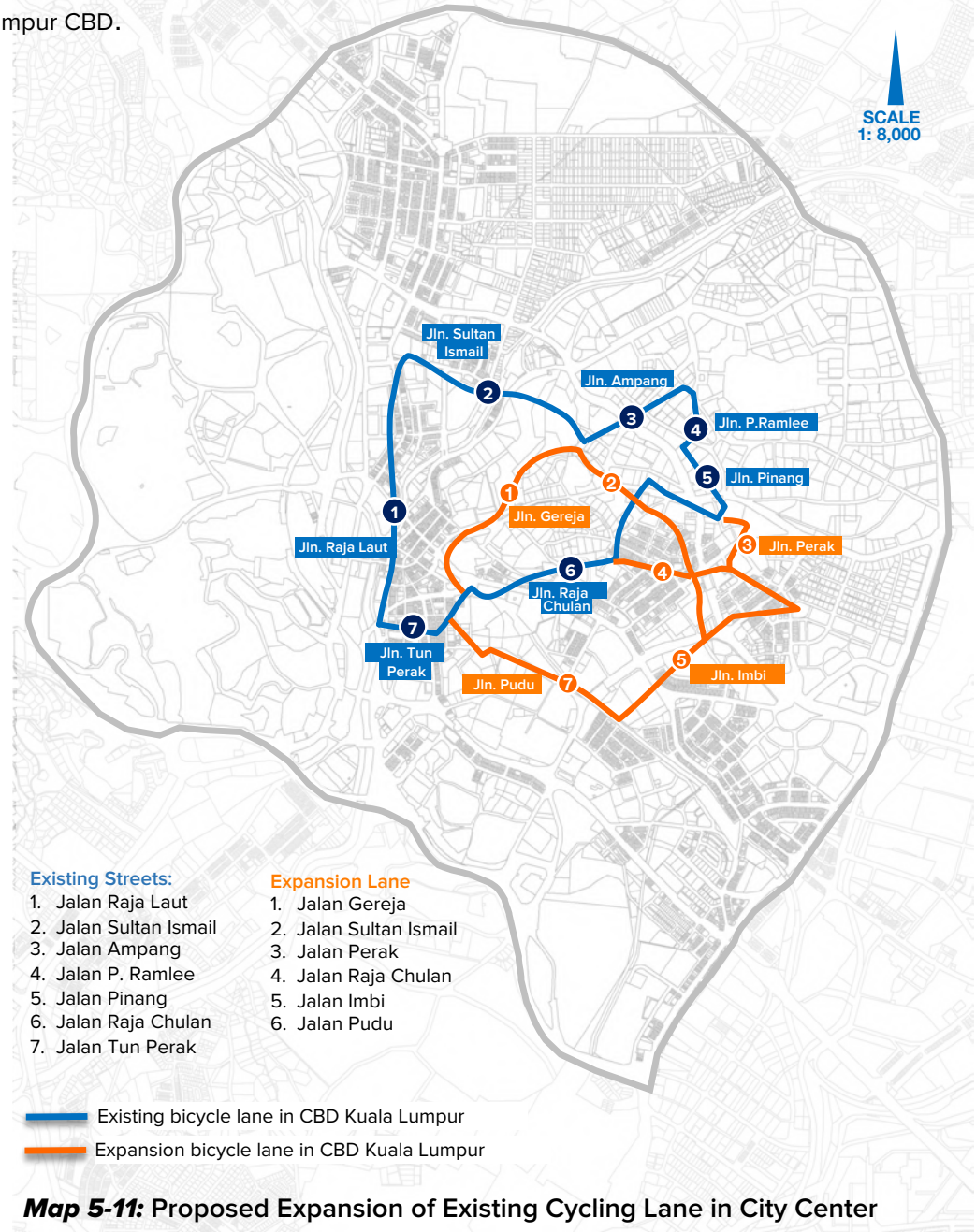
Rejuvenation Existing Cycling Lane Sungai Klang

DETAILED DEVELOPMENT 1:

Proposed Expansion of Existing Cycling Lane in City Center

Description:

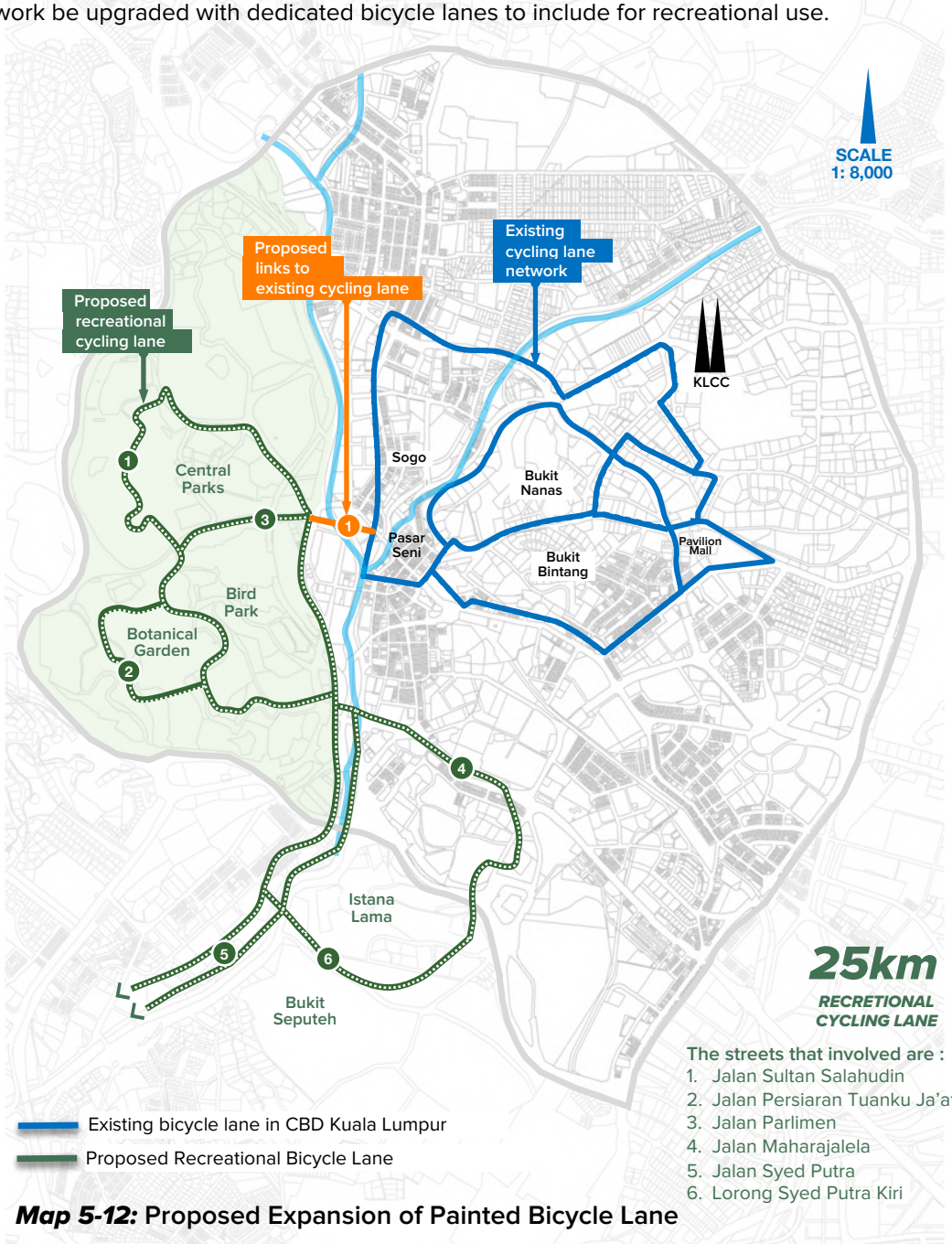
The expansion of the existing painted bicycle lane network in CBD will increase the network of bicycle lane by additional **11 km** connecting other popular public places/spots/points of interest in the city center. The expansion will result in **26 km** (total length) of bicycle lane in KL CBD area. The map highlighted the proposed expansion of the existing painted bicycle lane in Kuala Lumpur CBD.



Map 5-11: **Proposed Expansion of Existing Cycling Lane in City Center**

DETAILED DEVELOPMENT 2:
Proposed Expansion of Painted Bicycle Lane

Description:
The Cycling Kuala Lumpur Bicycle Map Project has identified a network of informal bicycle routes around the KL CBD. However, these routes are proposed along existing roadways that are not provided with bicycle lanes. Therefore, this action recommends that the entire informal network be upgraded with dedicated bicycle lanes to include for recreational use.



Map 5-12: **Proposed Expansion of Painted Bicycle Lane**

DETAILED DEVELOPMENT 3:

Commuting Cycling Lanes Connecting Suburban Residential Areas to the City Centre

Description:

The Cycling Kuala Lumpur Bicycle Map Project has identified a network of informal bicycle routes along existing roadways, in and around the KL city centre. As the proposed routes lack appropriate safety measures to protect the safety of the cyclists, this action enhances the proposal by upgrading the route to be fully dedicated for bicycles. This action has also identified 6 routes that connect suburban residential areas to the KL city centre. These 6 routes will all have dedicated bicycle lanes to cater for, not only recreational use, but more importantly, commuting bicycle traffic.

PROPOSED 6 CYCLING LANES CONNECTING TO THE CITY CENTER

01
Titiwangsa – City Centre

02
Ampang Hilir – City Centre

03
Sentul – City Centre

04
Pandan – City Centre

05
Bandar Permaisuri – City Centre

06
Bangsar/ Seputeh – City Centre

Chronology of Bicycle Lane Development in Kuala Lumpur

The following shows the chronology of bicycle lane development in Kuala Lumpur that has been developed since 1980.

1980

TAMAN TUN DR. ISMAIL (TTDI)

5KM

2015

DEDICATED BICYCLE HIGHWAY (MIDVALLEY – DATARAN MERDEKA)

5.5 KM

2018

BLUE LANE LOOP (CITY CENTRE)

11.0 KM

2019

WANGSA MAJU AND SENTUL BICYCLE LANE

11.4 KM

2020 - 2028

OVERALL PROPOSED BICYCLE LANE

63.4 KM

32.9 KM TOTAL OF EXISTING BICYCLE LANE DEVELOPMENT IN KUALA LUMPUR

TOTAL BICYCLE LANE BY 2028 = 96.3 KM

DETAILED LANE 1:

Titiwangsa – City Centre

The following shows the index of proposed cycling lane from Titiwangsa to City Centre. The cycling lane proposed will connect Taman Tasik Titiwangsa with existing cycling lane (blue loop) via Jalan Ampang. The detailed index of proposed cycling lane shown as below:

1. ROUTES

a) Sungai Bunus (1.9 KM)
b) Rejunevation Existing Sungai Bunus (1.1 KM)
c) Jalan Raja Abdullah (0.3 KM)
d) Jalan Raja Muda Musa (0.3 KM)
e) Jalan Hassan Salleh (0.3 KM)
f) Elevated Crossing (0.5 KM)

2. DESIGN

a) Dedicated cycling lane for route A and B and F
b) Sharing cycling lane for route C, D and E
(Refer design guidelines for details)

3. CROSSING

There are 3 crossings involved:
a) Jalan Raja Abdullah – Jalan Raja Uda
b) Jalan Raja Abdullah – Jalan Raja Alang
c) Jalan Raja Abdullah – Jalan Raja Muda Musa

Proposed components for crossing:
- Smart Traffic Lights
- Speed Hump
- Traffic Calming

The Map below shows the alignment of the proposed cycling lane from Taman Tasik Titiwangsa to the City Centre. The proposed lane involves the rejuvenation project of the existing lane along Sungai Bunus. It will connect Taman Tasik Titiwangsa with the existing cycling lane and beyond to KLCC.

Fig. 34: Concept Map of Detailed Proposed Bicycle Development From Titiwangsa to KLCC

DETAILED LANE 2:
Ampang Hilir – City Centre

The following shows the index of proposed cycling lane from Ampang Hilir (Taman Tasik Ampang Hilir) to the existing blue lane in the City Centre (loop). The detailed index of proposed cycling lane shown as below:

1. ROUTES

a) Jalan Ampang (2.2 KM)
b) Jalan Ampang Hilir (1.9 KM)
c) Jalan Kedondong (0.5 KM)

2. DESIGN

a) Sharing cycling lane for route A, B and C
(Refer design guidelines for details)


3. CROSSING

There are 7 crossings involved:
a) Jalan Ampang – Jalan P. Ramlee
b) Jalan Ampang Pedestrian Crossing 1
c) Jalan Ampang Pedestrian Crossing 2
d) Jalan Ampang Pedestrian Crossing 3
e) Jalan Ampang Pedestrian Crossing 4
f) Jalan Ampang – Jalan Tun Razak
g) Jalan Ampang – Jalan Ampang Hilir

Proposed components for crossing:
- Smart Traffic Lights
- Speed Hump
- Traffic Calming

The Map below shows the alignment of the proposed cycling lane from Ampang Hilir (Taman Tasik Ampang Hilir) to the existing blue lane in the City Centre (loop).

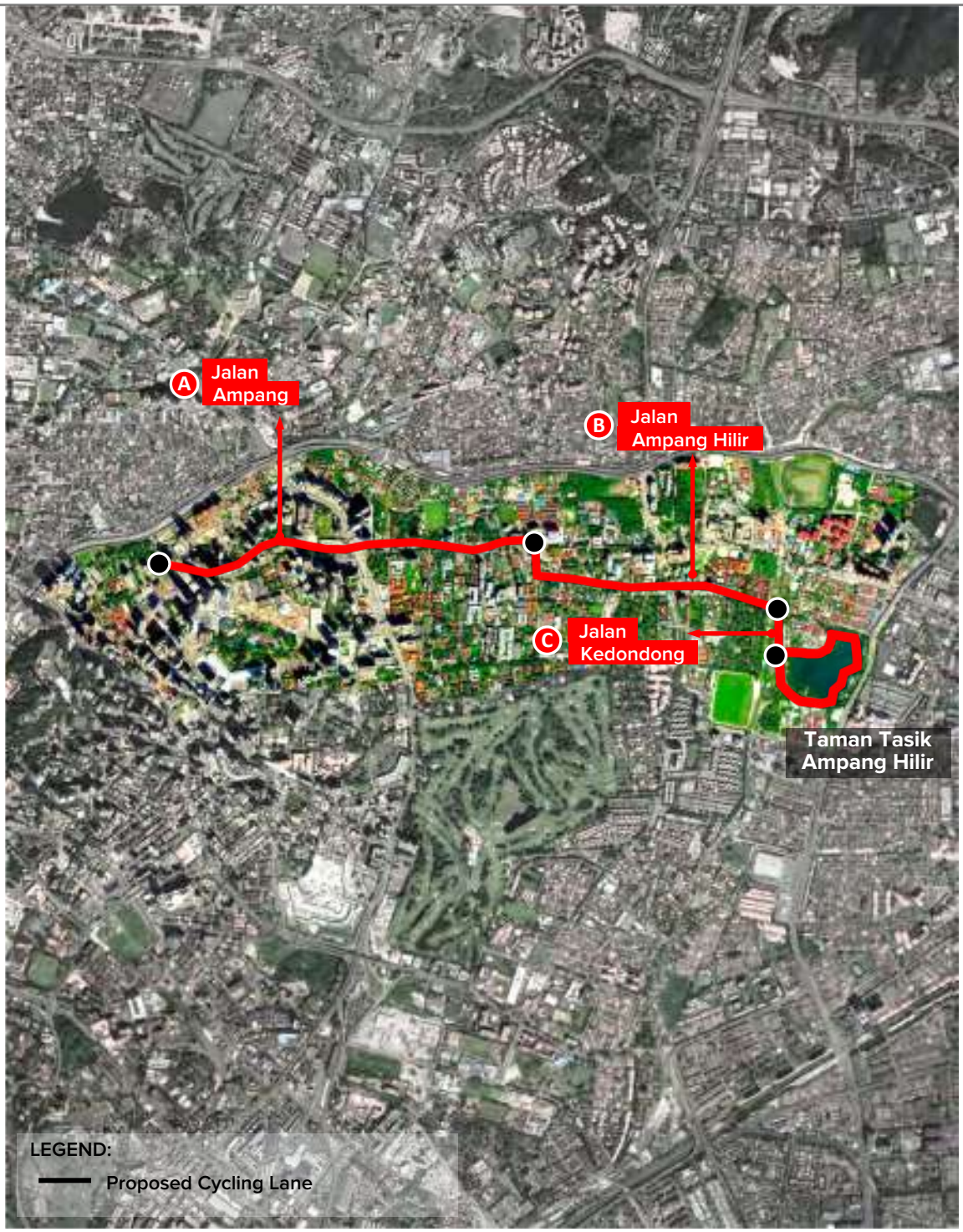


Fig. 35: Concept Map of Detailed Proposed Bicycle Development From Ampang to KLCC

DETAILED LANE 3:

Sentul – City Centre

The following shows the index of proposed cycling lane from Sentul (Kampung Batu KTM Station) to the City Centre, connecting with the existing blue lane (loop). The detailed index of proposed cycling lane shown as below:

1. ROUTES

a) Jalan Kampung Batu (0.3 KM)
b) Jalan Ipoh (2.3 KM)
c) Jalan Sultan Azlan Shah (2.8 KM)
d) Jalan TAR (0.8 KM)

2. DESIGN

a) Sharing cycling lane for all routes
(Refer design guidelines for details)

3. CROSSING

There are 19 crossings involved:
a) Jalan Kampung Batu – Jalan Ipoh
b) Jalan Ipoh – Jalan Gunung Semanggol
c) Jalan Ipoh – Jalan Batu Kentomen
d) Jalan Ipoh Pedestrian Crossing 1
e) Jalan Ipoh – Jalan Khalsa
f) Jalan Ipoh – Jalan St. Thomas
g) Jalan Ipoh Pedestrian Crossing 2
h) Jalan Ipoh – Persiaran Parkview
i) Jalan Sultan Azlan Shah – Jalan Pipit
j) Jalan Sultan Azlan Shah Pedestrian Crossing 1
k) Jalan Sultan Azlan Shah – Jalan Perhentian
l) Jalan Sultan Azlan Shah Pedestrian Crossing 2
m) Jalan Sultan Azlan Shah Pedestrian Crossing 3
n) Jalan Sultan Azlan Shah – Jalan Sentul
o) Jalan Sultan Azlan Shah – Jalan Tun Ismail
p) Jalan Sultan Azlan Shah Pedestrian Crossing 4
q) Jalan Sultan Azlan Shah – Jalan TAR
r) Jalan TAR Pedestrian Crossing 1
s) Jalan TAR Pedestrian Crossing 2

Proposed components for crossing:
- Smart Traffic Lights
- Speed Hump
- Traffic Calming

The following map shows the alignment of the proposed cycling lane from Sentul to City Centre. It will connect existing blue lane in Kampung Batu with the existing blue lane in City Centre (loop).

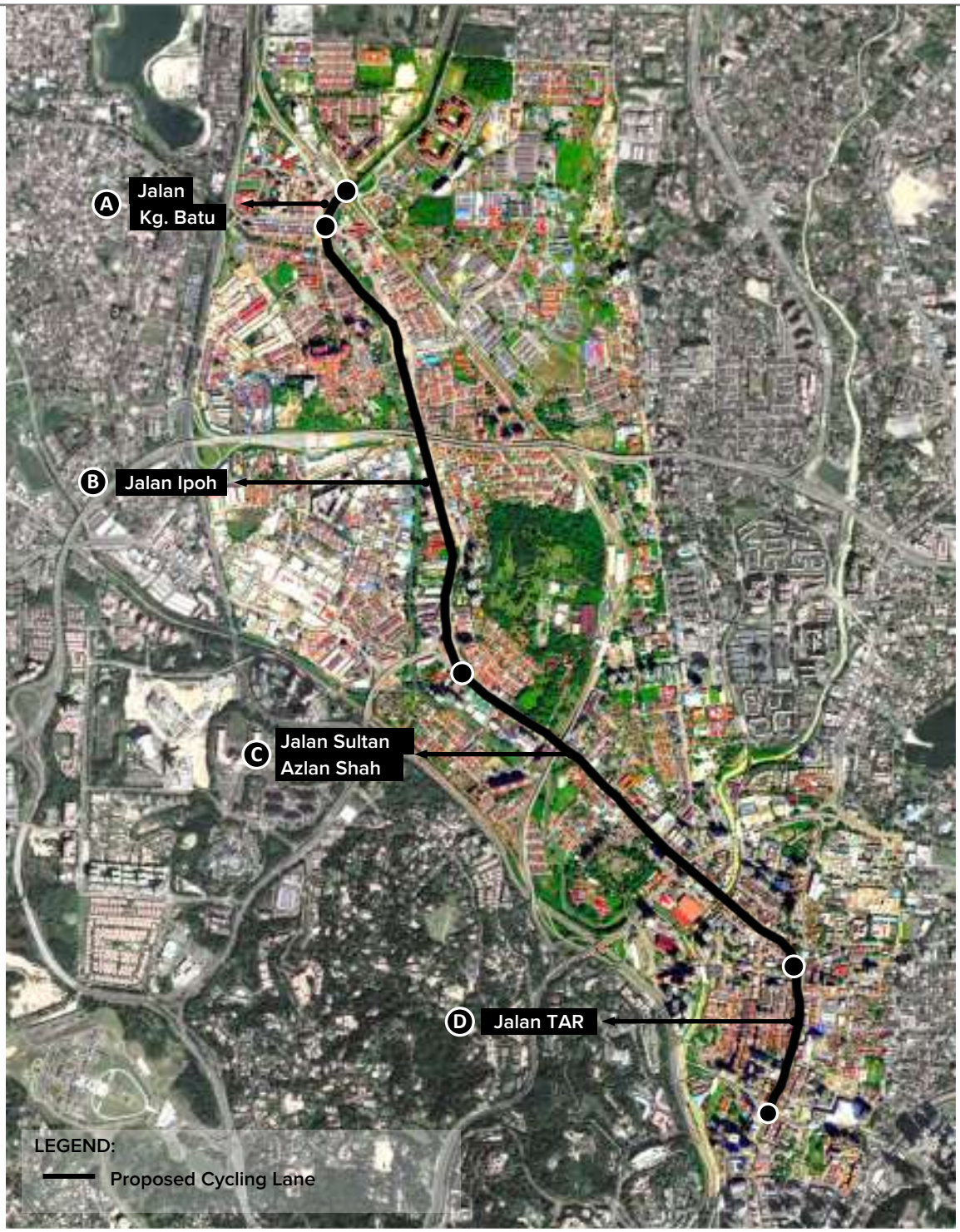


Fig. 36: Concept Map of Detailed Proposed Bicycle Development From Sentul to KLCC

DETAILED LANE 4:
Pandan – City Centre

The following shows the index of proposed cycling lane from Kampung Pandan to the City Centre, connecting with the existing blue lane (loop) and the proposed cycling lane in the City Centre. The detailed index of proposed cycling lane shown as below:

1. ROUTES

a) Jalan Kampung Pandan (2.2 KM)
b) Jalan Sultan Ismail (0.3 KM)

2. DESIGN

a) Sharing cycling lane for all routes
(Refer design guidelines for details)

3. CROSSING

There are 3 crossings involved:
a) Jalan Kampung Pandan Pedestrian Crossing 1
b) Jalan Kampung Pandan – Jalan Perwira Junction
c) Jalan Kampung Pandan – Jalan Imbi Junction

Proposed components for crossing:
- Smart Traffic Lights
- Speed Hump
- Traffic Calming

The following map shows the alignment of the proposed cycling lane from Kampung Pandan to the City Centre, connecting with the existing blue lane (loop) and the proposed cycling lane in the City Centre.

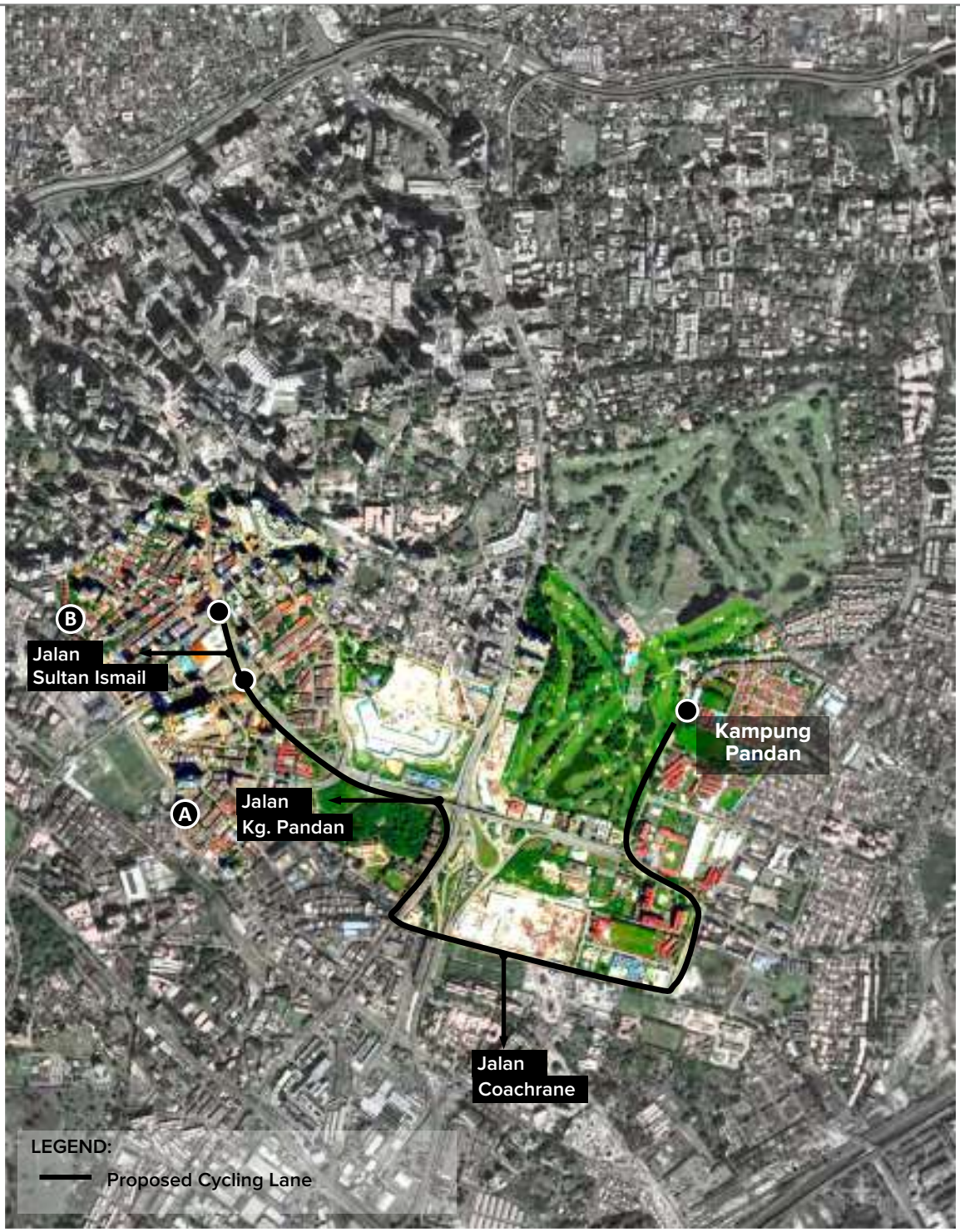


Fig. 37: Concept Map of Detailed Proposed Bicycle Development From Pandan to KLCC

DETAILED LANE 5:

Bandar Permaisuri– City Centre

The following shows the index of proposed cycling lane from Bandar Permaisuri (Taman Tasik Permaisuri) to the City Centre. The proposed cycling lane shall be connected with the proposed Pandan – City Centre lane. The detailed index of proposed cycling lane shown as below:

1. ROUTES

a) Jalan Yaacob Latif (1.6 KM)
b) Jalan Cheras (2.7 KM)
c) Jalan Pudu (0.2 KM)
d) Jalan Yew (0.8 KM)

2. DESIGN

a) Sharing cycling lane for all routes
(Refer design guidelines for details)

3. CROSSING

There are 14 crossings involved:
a) Jalan Yaacob Latif – Jalan Tasik Permaisuri 1 Junction
b) Jalan Yaacob Latif Pedestrian Crossing 1
c) Jalan Yaacob Latif Pedestrian Crossing 2
d) Jalan Yaacob Latif Junction
e) Jalan Yaacob Latif Roundabout
f) Jalan Cheras Pedestrian Crossing 1
g) Jalan Cheras Pedestrian Crossing 2
h) Jalan Cheras – Jalan Ikan Ayu Junction
i) Jalan Cheras Pedestrian Crossing 3
j) Jalan Cheras Pedestrian Crossing 4
k) Jalan Cheras – Jalan TAR Junction
l) Jalan Pudu Roundabout
m) Jalan Yew – Jalan Pasar Junction
n) Jalan Kampung Pandan Roundabout

Proposed components for crossing:
- Smart Traffic Lights
- Speed Hump
- Traffic Calming

The following map shows the alignment of the proposed cycling lane from Taman Tasik Permaisuri to the City Centre. The proposed lane will connect with another proposed cycling lane at Jalan Kampung Pandan.

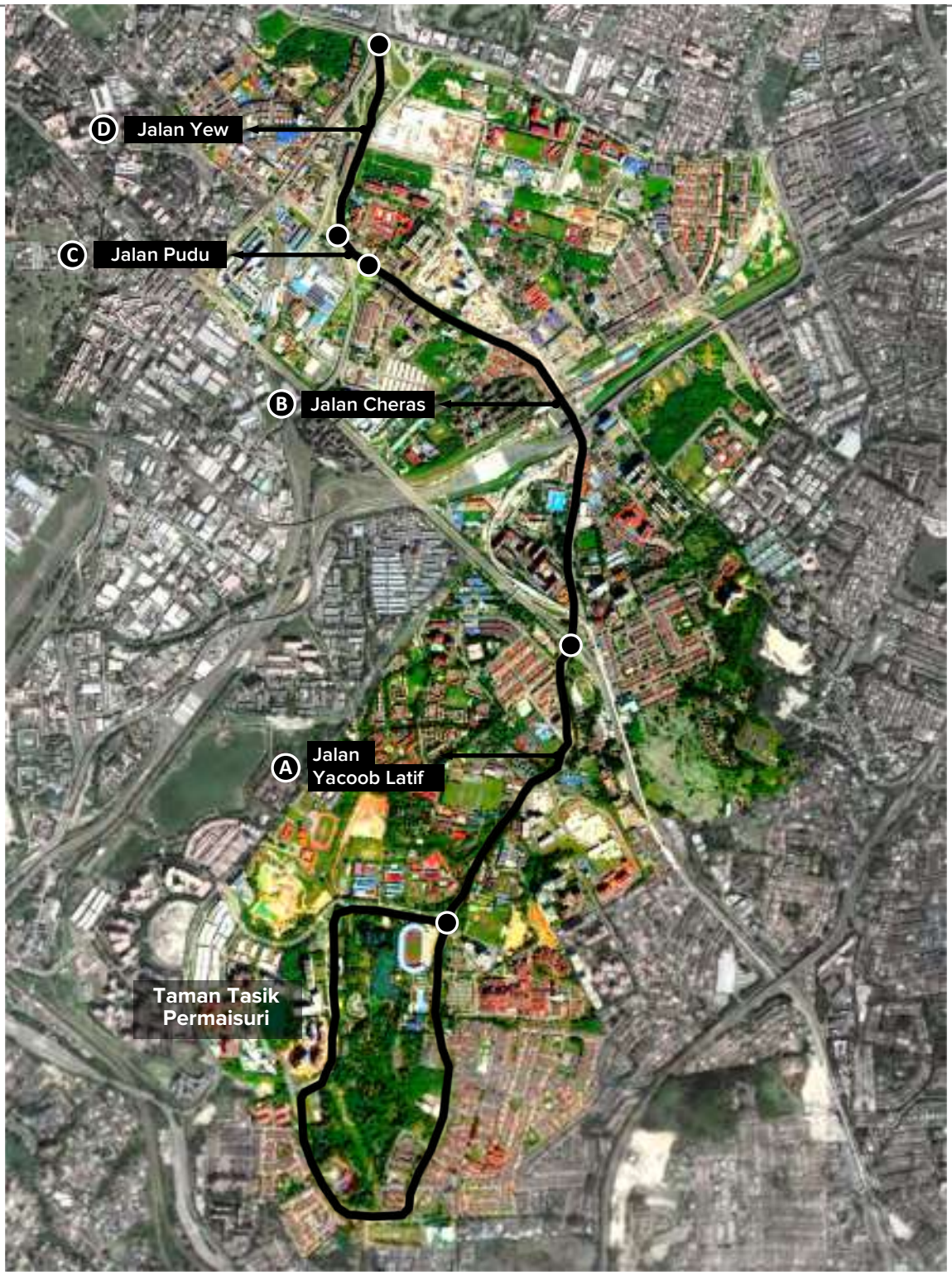


Fig. 38: Concept Map of Detailed Proposed Bicycle Development From Bandar Sri Permaisuri to KLCC

DETAILED LANE 6:

Bangsar Seputeh – City Centre

The following shows the index of proposed cycling lane from Bangsar/ Seputeh to the City Centre. The detailed index of proposed cycling lane shown as below:

1. ROUTES

a) Jalan Maarof (0.7 KM)
b) Jalan PJ Bangsar Bypass (0.7 KM)
c) Proposed Dedicated Bicycle Highway (0.5 KM)
d) Rejunevate Existing Cycling Lane Dataran Merdeka – Mid Valley Megamall (3.9 KM)

2. DESIGN

a) Dedicated cycling lane for routes C and D
b) Sharing cycling lane for routes A and B
c) (Refer design guidelines for details)

3. CROSSING

There are 3 crossings involved:
a) Jalan Maarof – Jalan Telawi 5 Junction
b) Jalan Maarof – Lorong Maarof 3 Junction
c) Jalan Maarof – Jalan Ara Junction

Proposed components for crossing:
• Smart Traffic Lights

The following map shows the alignment of the proposed cycling lane from Bangsar/ Seputeh to the City Centre. It involves the rejunevation of existing cycling lane from Midvalley Megamall to Dataran Merdeka.

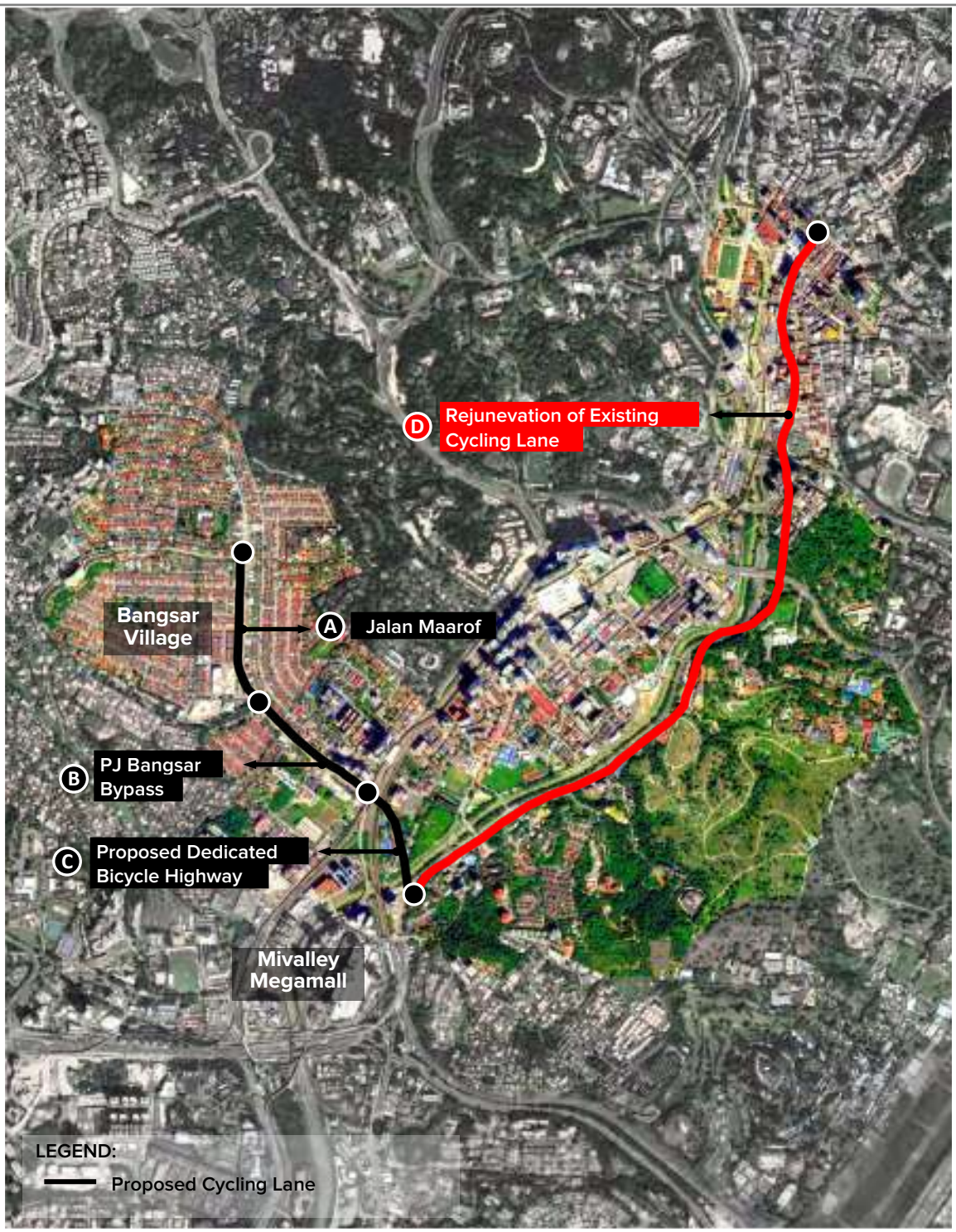


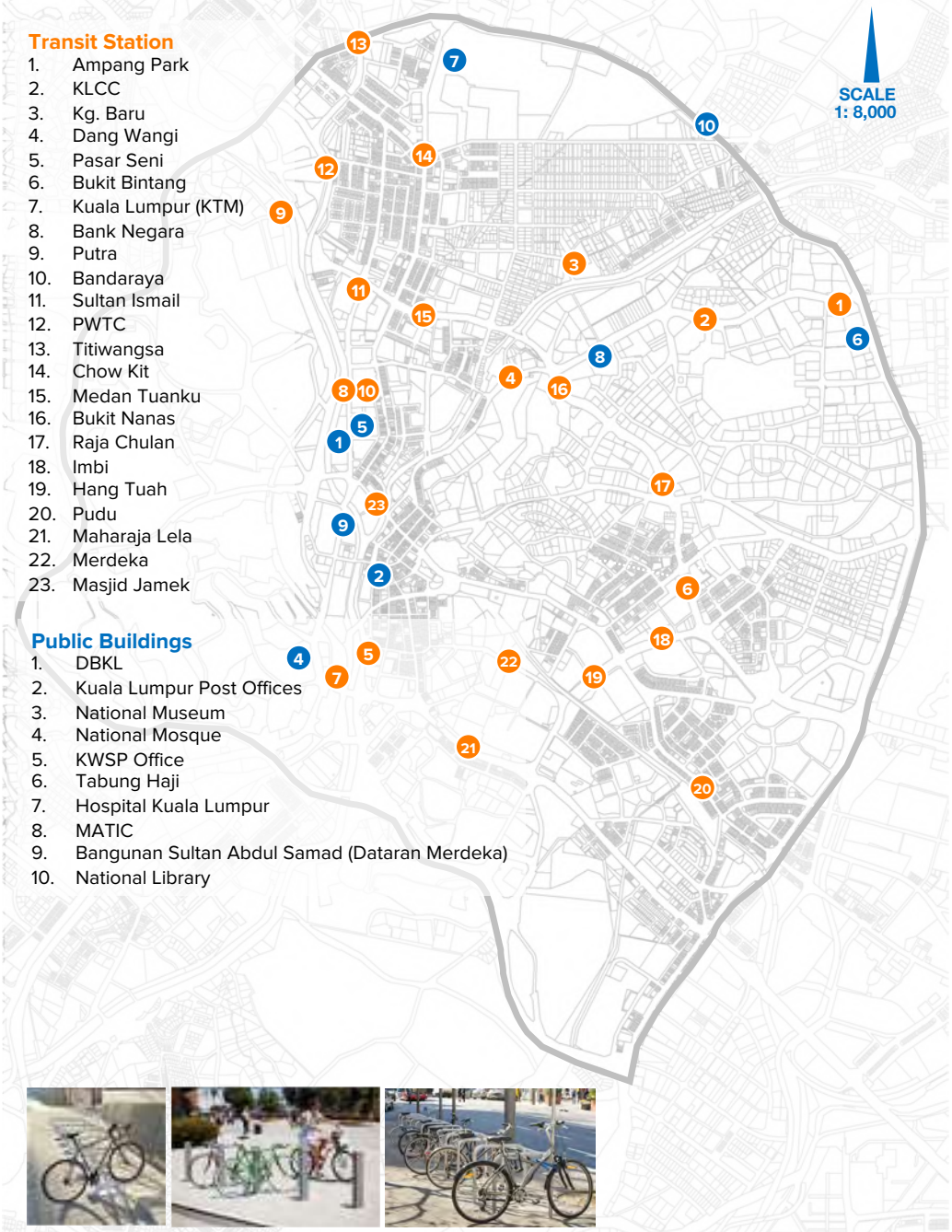
Fig. 39: Concept Map of Detailed Proposed Bicycle Development From Bangsar/ Seputeh to KLCC

DETAILED DEVELOPMENT 4 :

Proposed Bicycle Parking Racks At All 23 Transit Stations And 10 Public Buildings In Kuala Lumpur CBD

Description:

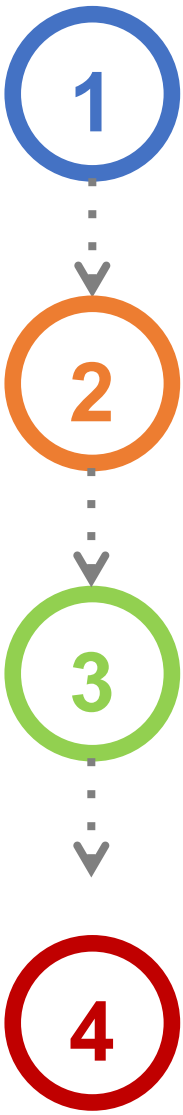
To provide bicycle parking racks at all 23 transit stations and 10 main public building in CBD to facilitate the first mile and last mile travel for publics



Map 5-13: **Distibution of Proposed Bicycle Parking Racks in Kuala Lumpur CBD**

INITIATIVE 5:
Develop Walkway and Bicycle Lane Infrastructure at High Potential Demand (HPD) Spots

The identification of areas for priority development of walkways and bicycle lanes follows a strict methodology. This detailed action describes the methodology employed to determine areas or points with the highest potential demand for walking and cycling activities. These areas with highest potential demand (HPD) would be the target for priority development. Once the zoning priority has been dealt with, the processes involved in identifying clusters of High Potential Demand (HPD) points can now begin. The processes involved is shown below. The same processes are applied for all zones in Kuala Lumpur may commence.



Locate High Potential Demand (HPD) Points

Most walking and cycling activities concentrated and accumulated around points like educational institutions, commercial complexes, transit stations etc. These points are known as 'High Potential Demand (HPD)' points – i.e. points with high demand for walking and cycling. Hence, the first step is to pinpoint all these HPD points within the zone.

Map Priority Zones

Distances from HPD points dictate different user priorities. The closer to the HPD points, the higher the priority is given to pedestrians and cyclists. Motorists are given priority only when distance from the HPD points exceed 2 km – the distance where walking and cycling may not be attractive or feasible. In this step, areas around HPD points within the radius of 400m, 2km and beyond are mapped.

Identify Potential Demand Density(PDD)

When HPD points are located close to each other, priority zones may overlapped. The number of overlapping priority zones will determine the potential demand density (PDD). The higher the number of overlapping zones, the higher the PDD. The areas of high PDD should be the focus and given the highest priority of walkways and cycling lanes development.

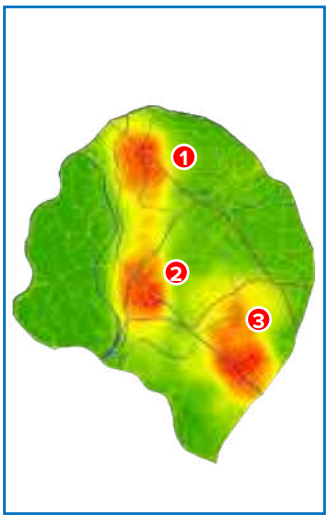
Tag Roads based on Priority Zones

Once the PDDs are identified, the development plan and design focus for each road within the area is easily determined. Hence, roads within pedestrian and bicycle priority zone will adopt design standards that ensure pedestrian and cyclists are given the highest priority. Similarly, roads within the motorization zone will adopt design guidance that ensure smooth traffic flow.

High Potential Demand for Six Development Zones in Kuala Lumpur

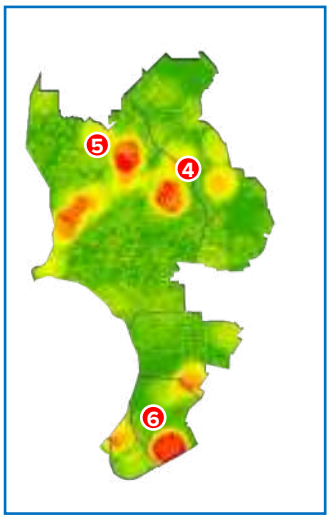
Once the zoning priority has been dealt with, the processes involved in identifying clusters of Potential Demand Density (PDD) can now begin. The following shows 21 High Potential Demand points for six development zones in Kuala Lumpur.

City Centre Strategic Development Zones



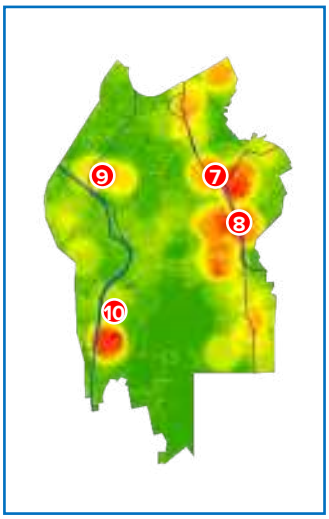
1. CHOW KIT
2. MASJID JAMEK
3. IMBI

Wangsa Maju – Maluri Strategic Development Zone



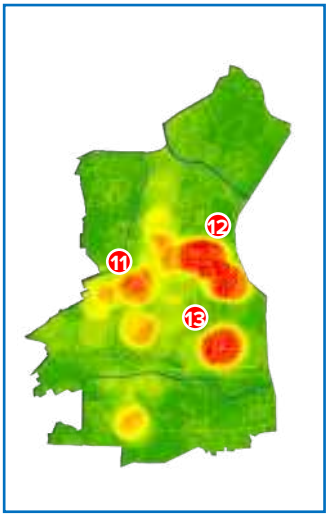
4. WANGSAMAJU
5. SETAPAK
6. MALURI

Bandar Tun Razak – Sg. Besi Strategic Development Zone



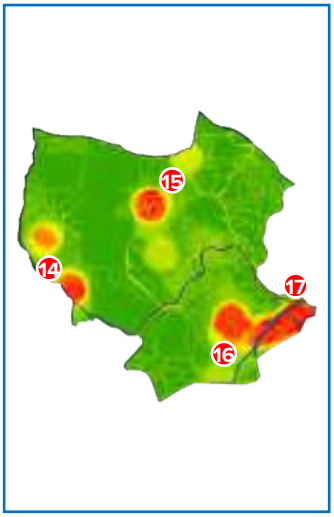
7. TAMAN MIDAH
8. TAMAN MUTIARA
9. SALAK SELATAN
10. SUNGAI BESI

Bukit Jalil - Seputeh Strategic Development Zone



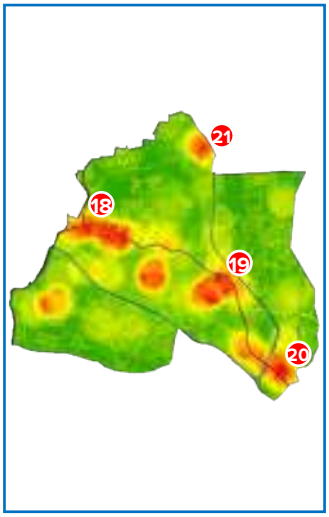
11. PANTAI DALAM
12. KUCHAI ENTREPRENEURS PARK
13. SRI PETALING

Damansara - Penchala Strategic Development Zone



14. TAMAN TUN DR ISMAIL
15. MONT KIARA
16. BANGSAR
17. BRICKFIELDS

Sentul - Manjalara Strategic Development Zone



18. METRO PRIMA
19. BATU
20. SENTUL
21. PUSAT BANDAR UTARA SELAYANG

Example of Mapping Process for Central Business District (CBD) Zone

The following diagrams illustrate the process to identify and map the Priority Zones for walking and cycling infrastructure development – using the KL CBD as an example. The same processes are applied for all other zones in Kuala Lumpur.

1

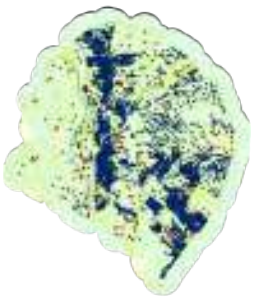
Locate High Potential Demand (HPD) Points

Map shows the location of High Potential Demand (HPD) points in the Central Business District (CBD) zone. These points include all the educational institutions, commercial complexes, office buildings, health institutions and transit stations in the CBD zone.

2

Map Priority Zones

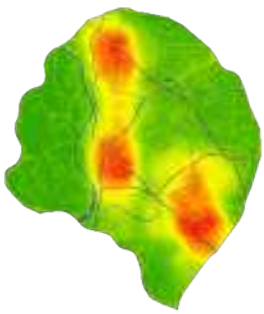
Map shows the zones within 400 m and 2 km radius of HPD points. The green coloured areas are areas within 400 m radius of the HPD points in the CBD zone. Whereas, the yellow coloured areas are areas within 2 km radius of the HPD points. In the CBD zone, almost all areas are within 400 m of some HPD point.



3

Identify Potential Demand Density (PDD)

Map shows the potential demand density (PDD) of the CBD zone. In CBD, it can be seen that there are three (3) clusters (coloured red) with high density (i.e. concentrations) of high potential demand (HPDs) points. The red coloured zone will be the areas assigned the highest priority for walkways and bicycle lanes development in the CBD zone.



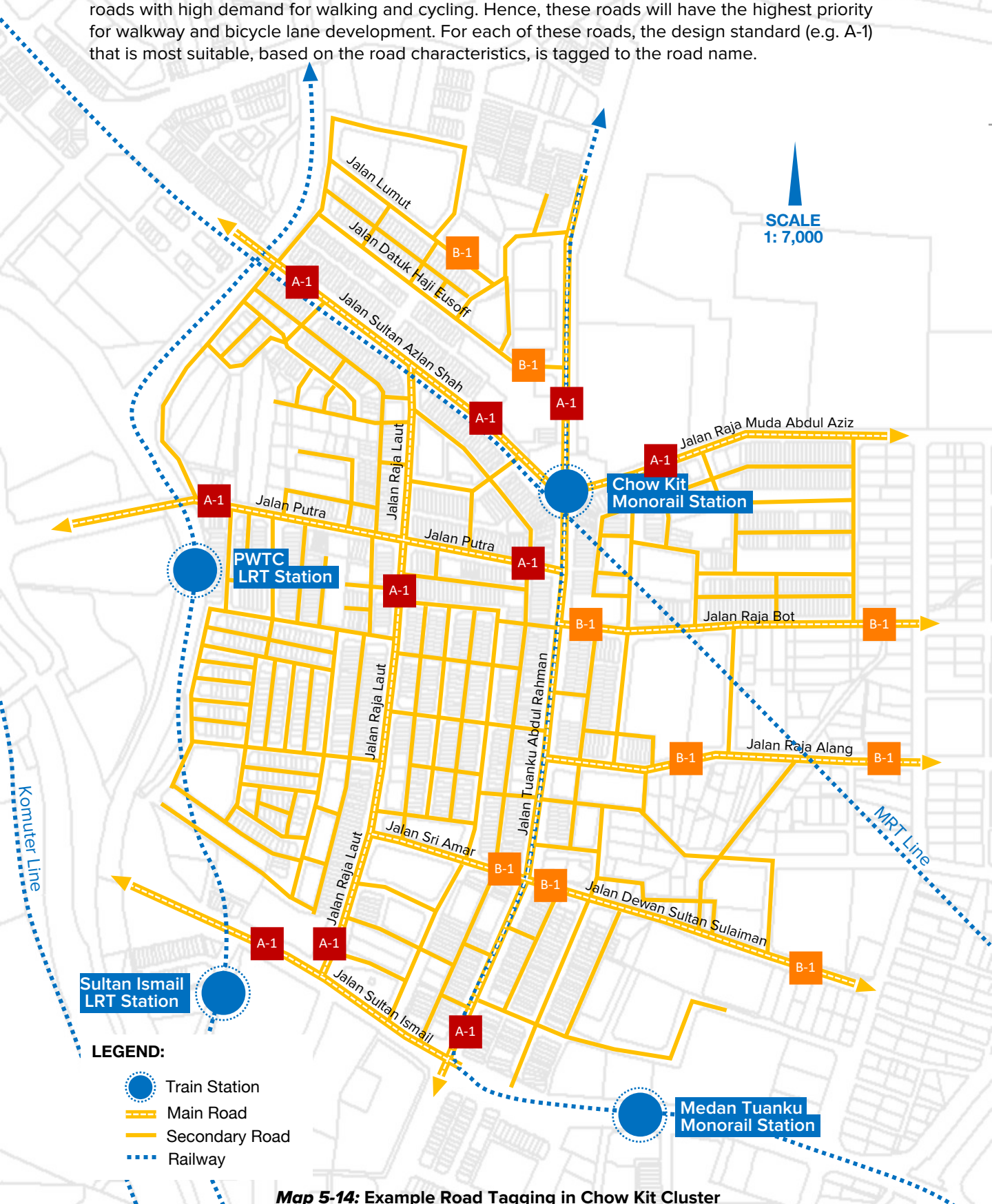
4

Tag Roads based on Priority Zones

Once the PDD has been marked, the roads within the PDD are tagged. These tagged roads indicate roadways that must be provided with walking and cycling infrastructures. The treatment for each road is dependent upon the ROW of the roads. For each category of ROW, there will be a corresponding design standard that will guide the infrastructure development.

Example Road Tagging 1: Chow Kit Cluster

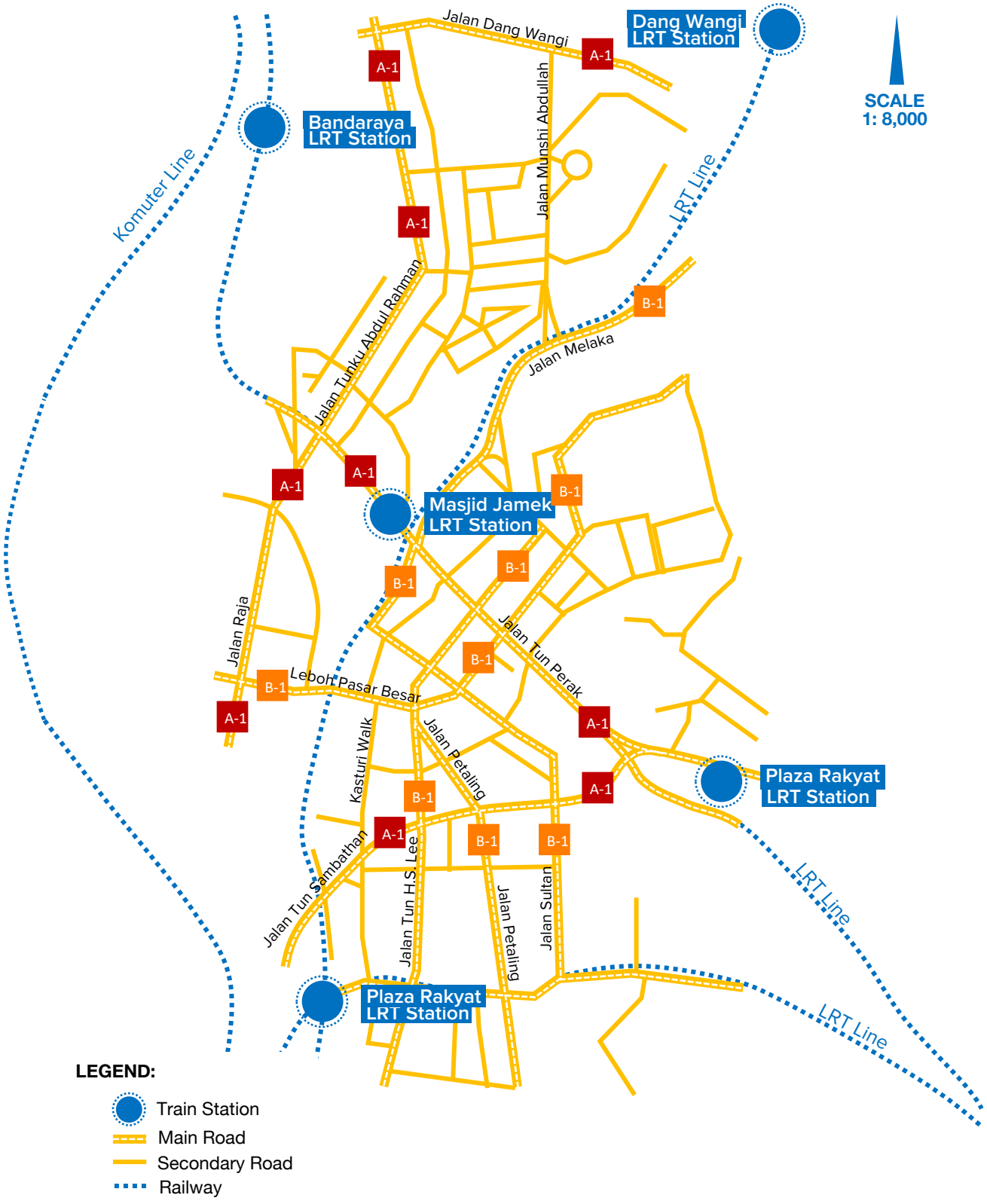
The following map shows the pedestrian priority area in Chow Kit. The roads within this area are roads with high demand for walking and cycling. Hence, these roads will have the highest priority for walkway and bicycle lane development. For each of these roads, the design standard (e.g. A-1) that is most suitable, based on the road characteristics, is tagged to the road name.



Map 5-14: **Example Road Tagging in Chow Kit Cluster**

Example Road Tagging 2: Masjid Jamek Cluster

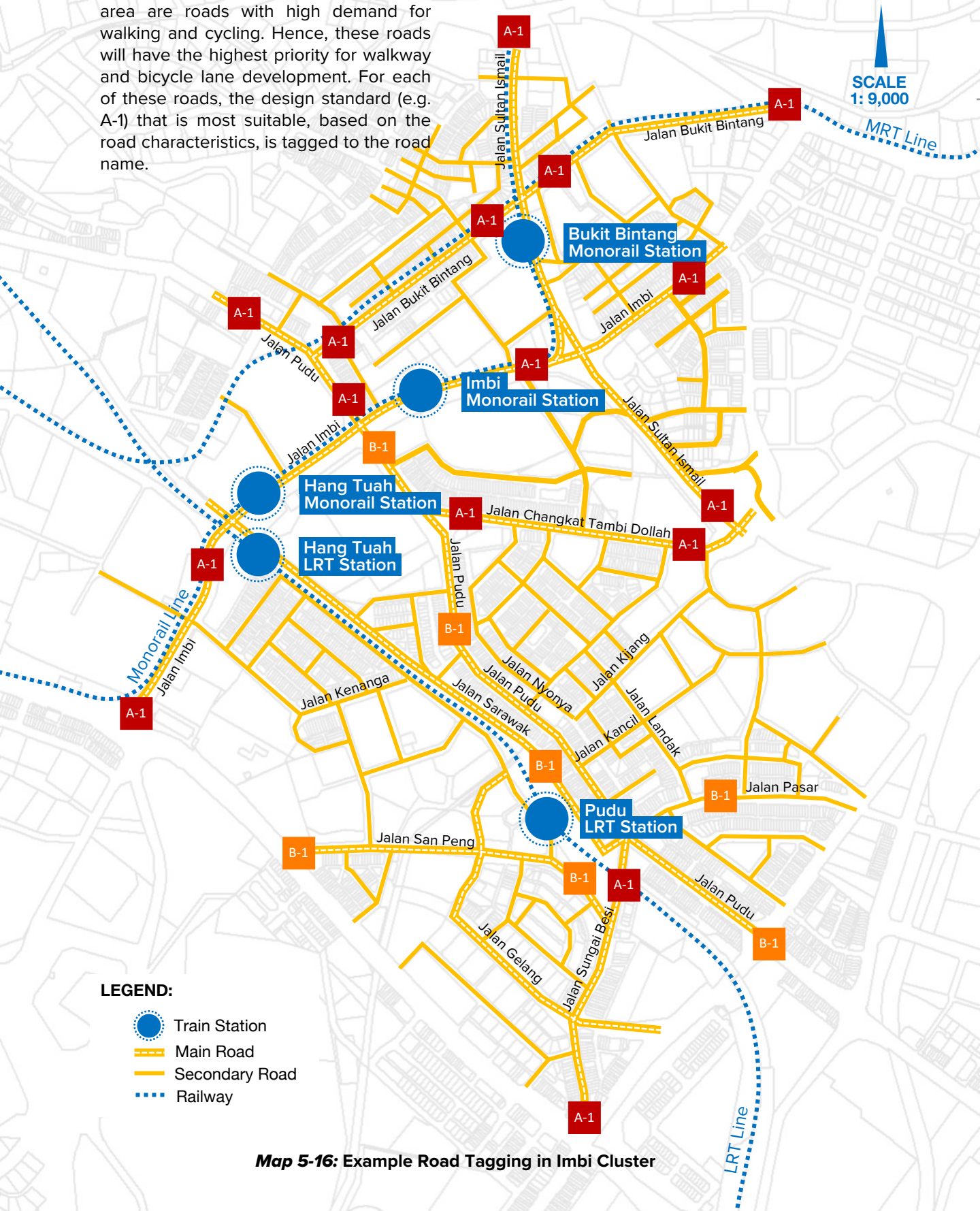
The following map shows the pedestrian priority area in Masjid Jamek. The roads within this area are roads with high demand for walking and cycling. Hence, these roads will have the highest priority for walkway and bicycle lane development. For each of these roads, the design standard (e.g. A-1) that is most suitable, based on the road characteristics, is tagged to the road name.



Map 5-15: **Example Road Tagging in Masjid Jamek Cluster**

Example Road Tagging 3: Imbi Cluster

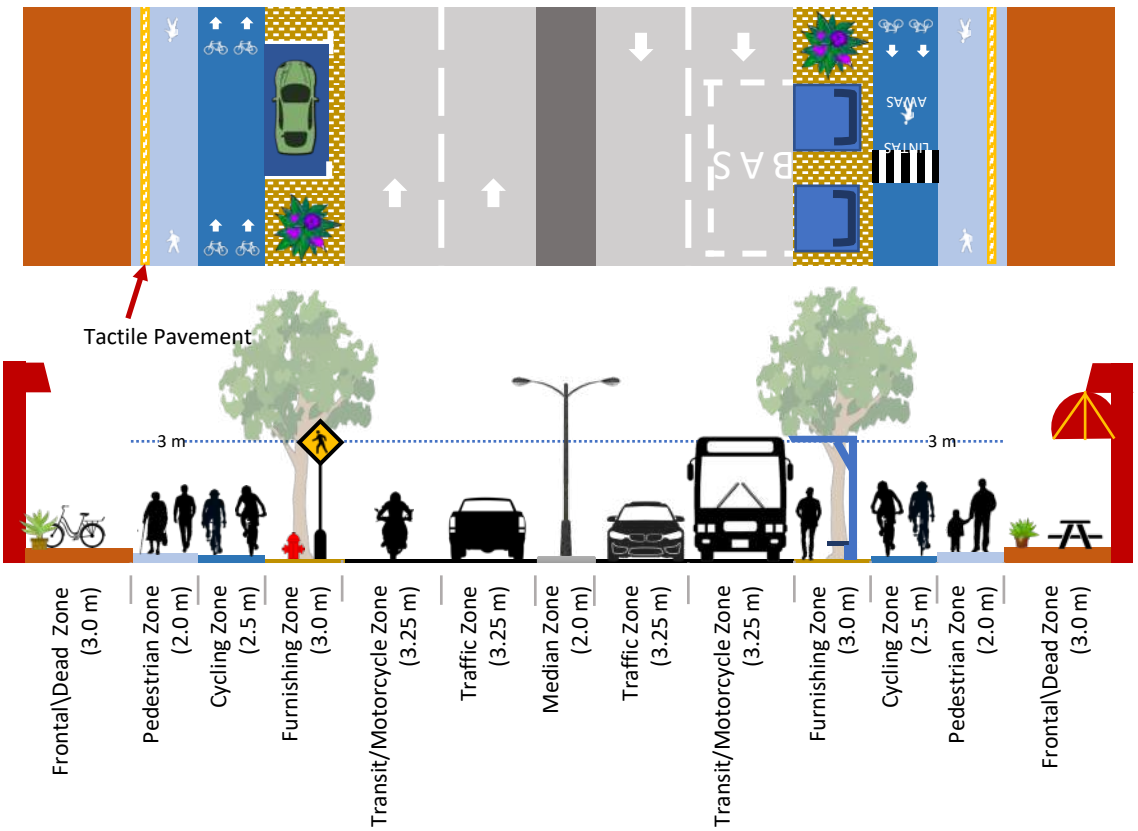
The following map shows the pedestrian priority area in Imbi. The roads within this area are roads with high demand for walking and cycling. Hence, these roads will have the highest priority for walkway and bicycle lane development. For each of these roads, the design standard (e.g. A-1) that is most suitable, based on the road characteristics, is tagged to the road name.



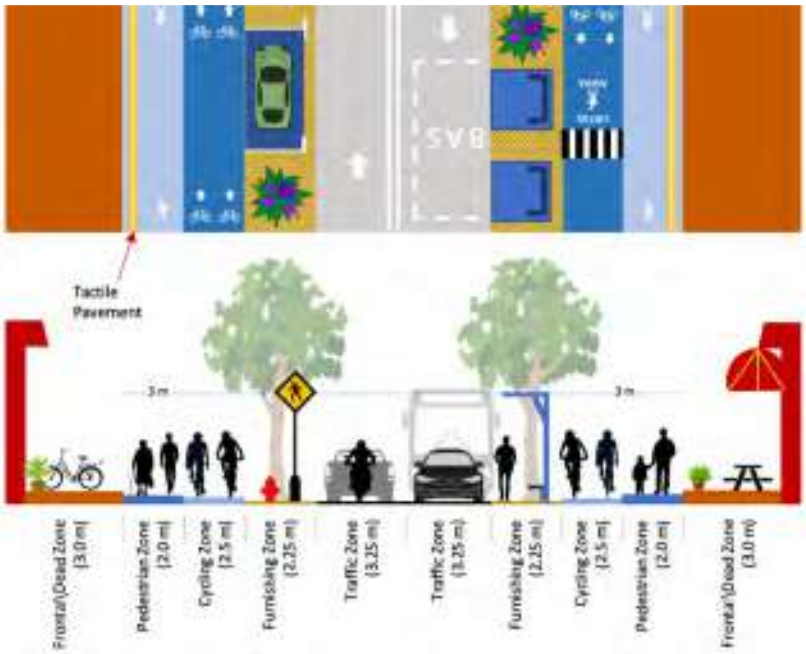
Map 5-16: **Example Road Tagging in Imbi Cluster**

Example Treatment of PDD Areas in City Centre Strategic Zone

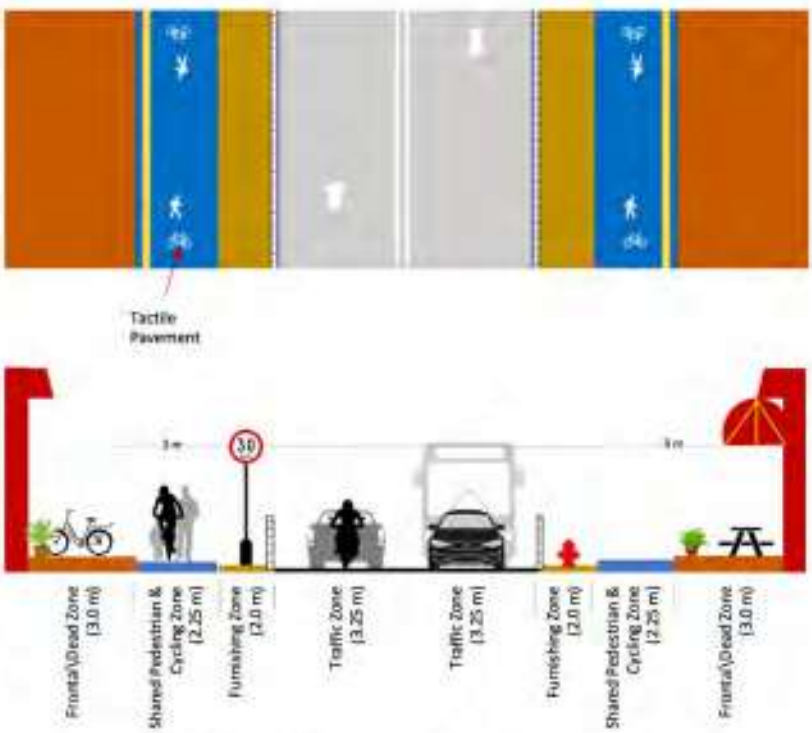
The previous 3 examples from the City Centre Strategic Zone illustrate how roads within high Potential Demand Density (PDD) areas are tagged with appropriate design standards (e.g. A-1, B-1 or C-1). To recap, high PDD areas are areas with largest concentration of High Potential Demand spots (i.e. spots with high probability of walking and cycling). Hence, Jalan Putra in Chow Kit should be retrofitted to follow the design standard A-1 (Example 1), while Jalan San Peng in Imbi should be retrofitted to follow the design standard B-1 (Example 3). The following diagrams illustrates the design standards (A-1, B-1 and C-1) that will guide the development of walkway and cycling infrastructures within these 3 sample areas.



Design A-1: Treatment for primary road within high PDD area



Design B-1: Treatments for secondary roads within high PDD area



Design C-1: Treatment for local roads within high PDD area

6

Chapter 06
IMPLEMENTATION PLAN

The following Implementation Plan proposes the sequence of actions to be taken in implementing the strategies and actions formulated in Chapter 4. The Implementation Plan reflects the priority actions according to needs, ease of implementation and the desired output and outcome. In addition the Implementation Plan proposes 'quick win' projects which are easily implemented to assure and convince the public as to DBKL's aspiration and commitment in championing walking and cycling as an important component of the liveable city agenda. Finally, the key implementations will be evaluated throughout the plan monitoring process to monitor and measure the results.

Photo Credit: Omar Elsharawy

Implementation Plan

The Master Plan proposes a total of 21 strategies and 85 actions according to three development phases. As highlighted earlier the strategies and corresponding actions are intended to gradually transform the mindset and travel behaviour of KL residents and commuters to achieve the target of 40% active mobility by 2028

PHASE 1 2019-2020	PHASE 2 2021-2023	PHASE 3 2024-2028
CREATING BUY-IN	FROM HAVING TO WALK TO WANT TO WALK	TRANSFORMATION IN URBAN LIFESTYLE
7 STRATEGIES 31 ACTIONS	9 STRATEGIES 33 ACTIONS	5 STRATEGIES 21 ACTIONS

Photo Credit: 9m Studio

Phase 1 Implementation Plan

Proposed implementation plan for phase 1 as shown in the following table

STRATEGY	ACTION		KEY ASPECT	TARGET SEGMENTS				TARGET OUTPUT	
				EAC	IAC	SAF	NWNH	START	TARGET
P1-1	1.	To establish a dedicated Kuala Lumpur Bike-Ped Unit to monitor the implementation of the KL Pedestrian and Cycling Master Plan 2019-2028	Governance	-	-	-	-	Q2 / 2019	• Established and operational by the end of 2019
	2.	To set up working groups under the Kuala Lumpur Bike-Ped Unit to be represented by government agencies, the private sector and NGOs	Governance	-	-	-	-	Q2 / 2019	• Buy-in from prominent private sector and NGOs in KL
P1-2	1.	To identify and implement physical retrofitting to improve the safety and comfort of existing pedestrian sidewalks and cycling lanes	Physical (Facility & Infrastructure)	•	•	•		Q3 / 2019	• 100% retrofitted by end of 2020
	2.	To review the effectiveness of the painted bicycle lane programme including its possible expansion within the CBD and residential zones	Physical (Facility & Infrastructure)	•	•	•		Q3 / 2019	• Expanded to at least 3 residential zones by 2020
	3.	To provide new pedestrian sidewalks and elevated walkways within high intensity walking areas	Physical (Facility & Infrastructure)	•	•			Q4 / 2019	• Pilot 1 project within the CBD to be exemplified in other places
	4.	To leverage on the Improvement Service Fund (ISF) to partially fund the future provision of pedestrian sidewalks and cycling lanes	Physical (Facility & Infrastructure)	•	•	•		Q1 / 2020	• Imposed on all new development from 2020 onwards
	5.	To enhance the first mile and last mile facilities and infrastructure along the KL primary public transportation corridor	Physical (Facility & Infrastructure)	•	•			Q1 / 2020	• Completion of pilot project at 12 transit stations by Q1 of 2020
P1-3	1.	To enhance the maintenance of pedestrian sidewalks and cycling paths including amenities for persons with disabilities (PWDs)	Physical (Facility & Infrastructure)	•	•			Q3 / 2019	• 100% well-maintained in CBD by 2020
	2.	To prioritise the rights and safety of pedestrians at critical crossings through physical measures	Safety	•	•	•		Q3 / 2019	• Implemented at all critical crossings in the CBD
	3.	To provide effective traffic calming measures in the vicinity of crossings in the residential zones to reduce vehicle speed to below 30km/hr	Safety and Enforcement	•	•	•		Q3 / 2019	• Implemented at all critical crossings in residential zones

EAC: Enthusiastic And Confident ***IAC:*** Interested And Concerned ***SAF:*** Strong And Fearless ***NWNH:*** No Way No How

...cont.

STRATEGY	ACTION		KEY ASPECT	TARGET SEGMENTS				TARGET OUTPUT	
				EAC	IAC	SAF	NWNH	START	TARGET
	4.	To intensify enforcement against illegal parking in the vicinity of entrances to schools that create risks to school children who walk and cycle	Enforcement				•	Q3 / 2019	• Implemented in all schools in the CBD
	5.	To incorporate security features of CPTED/safe city design in designing new sidewalks and pedestrian networks	Safety	•	•			Q4 / 2019	• Imposed on all new developments from 2020 onwards
	6.	To adopt a universal design standard that caters for the needs of persons with disabilities (PWDs)	Enforcement	•	•			Q4 / 2019	• Adopted at all existing transit stations and walkways in the CBD
P1-4	1.	To increase enforcement against violations by motorised vehicles along high intensity pedestrian areas	Enforcement				•	Q1 / 2020	• Zero violations by motorised vehicles
	2.	To enhance the use of CCTVs as a tool for gathering evidence in prosecuting violations against pedestrians and cyclists	Enforcement and Safety	•	•	•		Q1 / 2020	• None
	3.	To intensify the use of effective bollards in preventing motorcycles from encroaching into pedestrian sidewalks	Enforcement				•	Q1 / 2020	• Installation of bollards at all potential encroachment spots
	4.	To step up enforcement against jaywalking especially around busy intersections with the aid of CCTVs	Enforcement	•	•			Q1 / 2020	• Zero jaywalking cases by 2020
	5.	To leverage on the use of IT as a tool for recording and penalising violations against pedestrians within high intensity walking areas	Enforcement	•	•			Q2 / 2020	• None
	6.	To develop a mobile app as part of a Complaint Hotline for pedestrians and cyclists to record and report violations by motorists	Facility	•	•	•		Q2 / 2020	• Pilot testing of the app by mid-2020

EAC: Enthusiastic And Confident ***IAC:*** Interested And Concerned ***SAF:*** Strong And Fearless ***NWNH:*** No Way No How

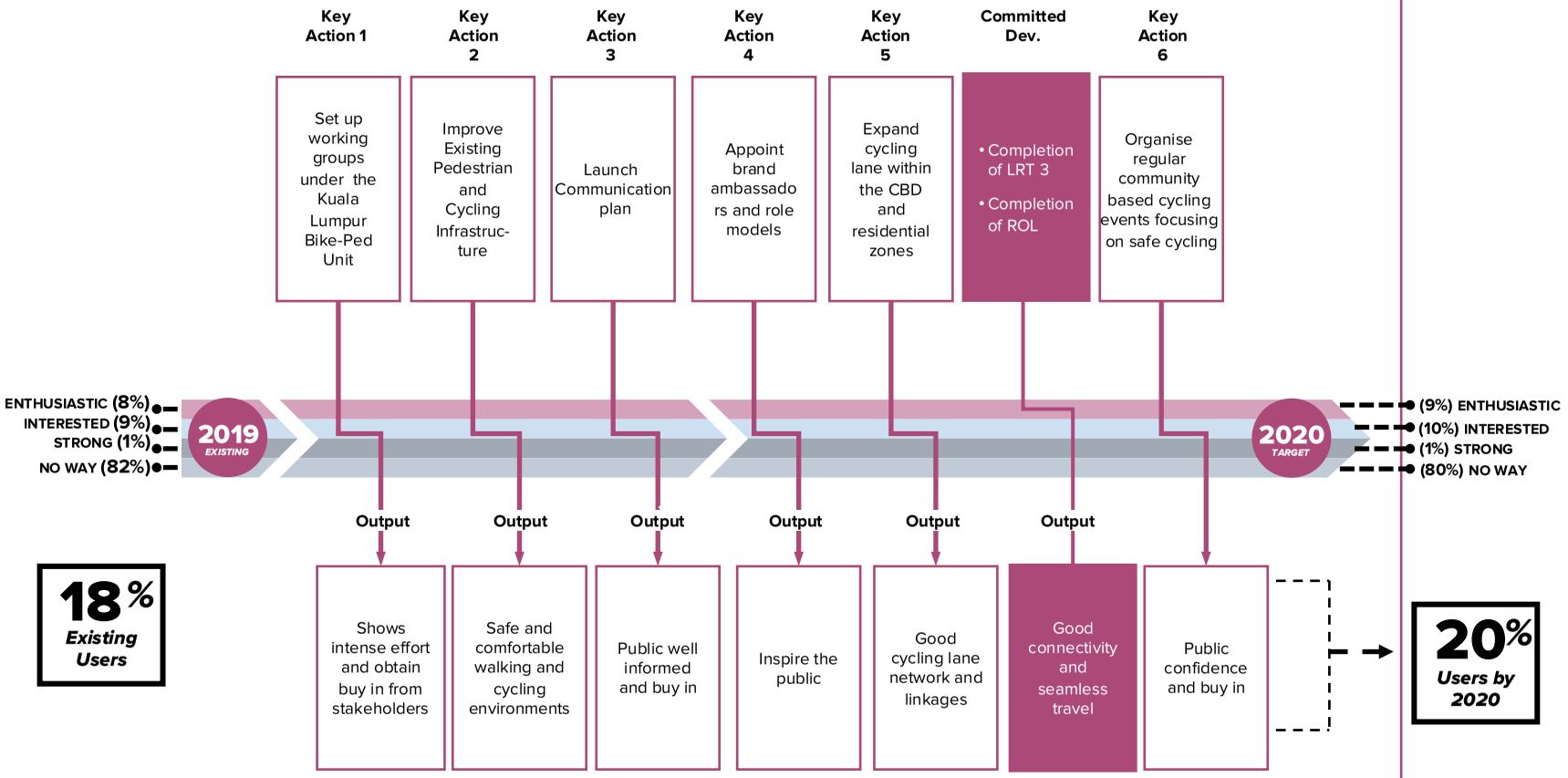
...cont.

STRATEGY	ACTION		KEY ASPECT	TARGET SEGMENTS				TARGET OUTPUT	
				EAC	IAC	SAF	NWNH	START	TARGET
P1-5	1.	To conduct active monitoring along pedestrian corridors using CCTVs and real time video analytics to complement physical policing	Safety	•	•	•	•	Q2 / 2020	• Fully employed by end of 2020
	2.	To provide better lighting along pedestrian sidewalks and underpasses connected to LRT/MRT stations	Safety	•	•			Q2 / 2020	• Installed lighting at all stations in the CBD
	3.	To develop a crime risk mobile app based on rigorous analytics to be incorporated into the existing SaveMe 999 apps.	Facility	•	•	•	•	Q2 / 2020	• Pilot testing of the app by mid-2020
P1-6	1.	To empower cycling NGOs as 'local champions' for nurturing 'buy in' among residents in the residential zones	Educational/ Awareness	•	•	•		Q3 / 2020	• Organised at least 1 or 2 programmes for empowering local champions
	2.	To support educational programmes for communities on cycling etiquettes and defensive cycling	Educational/ Awareness	•	•	•		Q2 / 2020	• Organised at least 2 or 3 programmes in 2020
	3.	To organise regular community based cycling events within the residential zones that focus on safe cycling	Educational/ Awareness	•	•	•		Q1 / 2020	• Organised regular events throughout the 2020 calendar year
	4.	To empower cycling NGOs in conducting regular clinics on safe/defensive cycling for schools and youth groups	Educational/ Awareness	•	•	•		Q1 / 2020	• Organised regular clinics targeting at least 50% of schools in the CBD
	5.	To incorporate defensive cycling clinics a regular feature of KL Car Free Morning	Educational/ Awareness	•	•	•	•	Q4 / 2019	• None
P1-7	1.	To launch a preliminary publicity blitz on DBKL's commitment to encourage walking and cycling as part of its livable city agenda	Educational/ Awareness	•	•	•	•	Q1 / 2020	• Public is well-informed about DBKL's aspiration
	2.	To embark on a 3-month trial run before refining the communications plan in terms of content, presentation and communication channels	Educational/ Awareness	•	•	•	•	Q3 / 2019	• Obtained buy-in from all user segments
	3.	To inspire the public by appointing brand ambassadors and role models to give motivational talks at dedicated events	Educational/ Awareness	•	•	•	•	Q4 / 2020	• Talks are attended by all user segments
	4.	To use campaigns, events and social media user-generated content that promote feel good testimonies	Educational/ Awareness	•	•	•	•	Q4 / 2020	• Wealth of content delivered to all user segments

EAC: Enthusiastic And Confident ***IAC:*** Interested And Concerned ***SAF:*** Strong And Fearless ***NWNH:*** No Way No How

Phase 1 Implementation Road Map and Projection

The time horizon for the short term is two years, starting from 2019 to 2020. It is estimated that there will only be a slight increment in three the positive user groups, and a slim reduction in the No Way No How group. The proposed strategies and actions to elicit this change are summarised in the following figure:



Phase 2 Implementation Plan

Proposed implementation plan for phase 2 as shown in the following table

STRATEGY	ACTION		KEY ASPECT	TARGET SEGMENTS				TARGET OUTPUT	
				EAC	IAC	SAF	NWNH	START	TARGET
P2-1	1.	To leverage on the River of Life Project as the hub for a spine of walking and cycling corridors	Facility	•	•	•		Q1 / 2021	• None
	2.	To provide space and support for activities and events organised by community groups, social enterprises and independent artisans	Placemaking	•	•			Q1 / 2021	• Provision of at lease 2-3 dedicated spaces in existing vibrant places in the CBD
	3.	To include performances by immigrant communities living in the CBD during mainstream cultural events and festivals	Placemaking	•	•			Q1 / 2022	• Organised at least 1-2 performances on weekend
	4.	To introduce the partial closure of vibrant streets during weekends/public holidays to celebrate and showcase street-based activities	Placemaking	•	•	•	•	Q1 / 2022	• Pilot test at streets in Bukit Bintang
	5.	To provide financial support for community projects that connect public spaces with safe and comfortable pedestrian and cycling corridors	Incentives	•	•	•		Q1 / 2022	• Provision of small grants for 2-3 community projects annually
	6.	To improve and maintain the quality of street furniture along pedestrian corridors such as benches, pagodas, public art and street murals	Facility	•	•			Q2 / 2021	• Fully improved by end of 2021
	7.	To conduct active monitoring along walking/cycling corridors using CCTVs to complement physical policing	Safety	•	•	•		Q1 / 2022	• All black spots in the CBD are monitored using CCTVs
P2-2	1.	To embark on a continuous public consultation programme on future pedestrianisation along vibrant and high intensity walking areas	Educational / Awareness	•	•			Q1 / 2022	• None
	2.	To complement pedestrianisation through wayfinding using conventional medium such as physical signage and/or through mobile apps	Facility	•	•			Q1 / 2022	• Provision of wayfinding facilities at all focal areas in the CBD
P2-3	1.	To design mobile apps for trip planning that offer information on walking and cycling within the CBD and to and from the residential zones	Facility	•	•	•		Q1 / 2021	• Pilot testing of apps by mid-2021
	2.	To incorporate wayfinding elements in the mobile apps for the use of local residents, commuters and tourists	Facility	•	•	•		Q1 / 2021	• None

EAC: Enthusiastic And Confident ***IAC:*** Interested And Concerned ***SAF:*** Strong And Fearless ***NWNH:*** No Way No How

...cont.

STRATEGY	ACTION		KEY ASPECT	TARGET SEGMENTS				TARGET OUTPUT	
				EAC	IAC	SAF	NWNH	START	TARGET
P2-4	1.	To replicate the success of the DBKL placemaking project in Bukit Bintang at appropriate locations starting with TTDI as a pilot project	Placemaking	•	•			Q1 / 2021	• Launch TTDI project by end of 2021
	2.	To launch the One Project Per Community as a flagship community placemaking project that champions walking and cycling	Placemaking	•	•			Q4/ 2021	• Target at least 2-3 communities in 2021
P2-5	1.	To launch the intermediate phase of the communications plan by focusing on a Wow campaign heavily supported by social media	Education / Awareness	•	•	•	•	Q1 / 2022	• Message delivered to all user segments
	2.	To intensify walking and cycling competitions such as the Spartan Race, Viper Challenge and RIUH, etc.	Education / Awareness	•	•	•	•	Q1 / 2022	• Organised at least 1 competition every 3 months
	3.	To partner traditional and social media for content seeding based on testimonials from participants	Education / Awareness	•	•	•	•	Q2 / 2022	• Upload testimonials representative of all user segments
P2-6	1.	To partner bicycle shops in offering easy payment and trade in schemes in a Bike For Life programme	Incentive	•	•	•		Q1 / 2023	• Target 3-5 shops in 2023
	2.	To organise and pilot exciting cycling events for school children that focus on safety and a healthy lifestyle	Education / Awareness	•	•	•		Q2 / 2021	• Pilot test at 2-3 schools in the CBD
	3.	To appoint national sportsmen/sportswomen as brand ambassadors in monthly Wow campaigns on social and mass media	Education / Awareness	•	•	•		Q2/ 2023	• One sportsman / sportswoman ambassador by 2022
P2-7	1.	To develop a 25 km painted bicycle lane network encompassing the routes recommended in the Cycling KL bicycle map project	Physical (Infrastructure)			•		Q1/ 2023	• Completed by 2023
	2.	To provide bicycle parking racks at all LRT/MRT stations and in the vicinity of major public buildings in Kuala Lumpur CBD	Physical (Facility)			•		Q3/ 2020	• Completed by 2021 at all stations and public buildings in the CBD
	3.	To expand the existing painted bicycle lane network to appropriate locations in the 6 residential zones	Physical (Infrastructure)	•		•		Q1/ 2023	• Completed by 2023
	4.	To provide parking racks for micromobility vehicles at all LRT/MRT stations and near major public buildings	Physical (Facility)			•		Q3/ 2023	• Completed by 2023 at all stations and public buildings in the CBD
	5.	To require new developments to provide pedestrian walkways and cycling lanes for the issuance of planning permission	Enforcement	•	•	•		Q4/ 2021	• Fully enforced by 2022

EAC: Enthusiastic And Confident ***IAC:*** Interested And Concerned ***SAF:*** Strong And Fearless ***NWNH:*** No Way No How

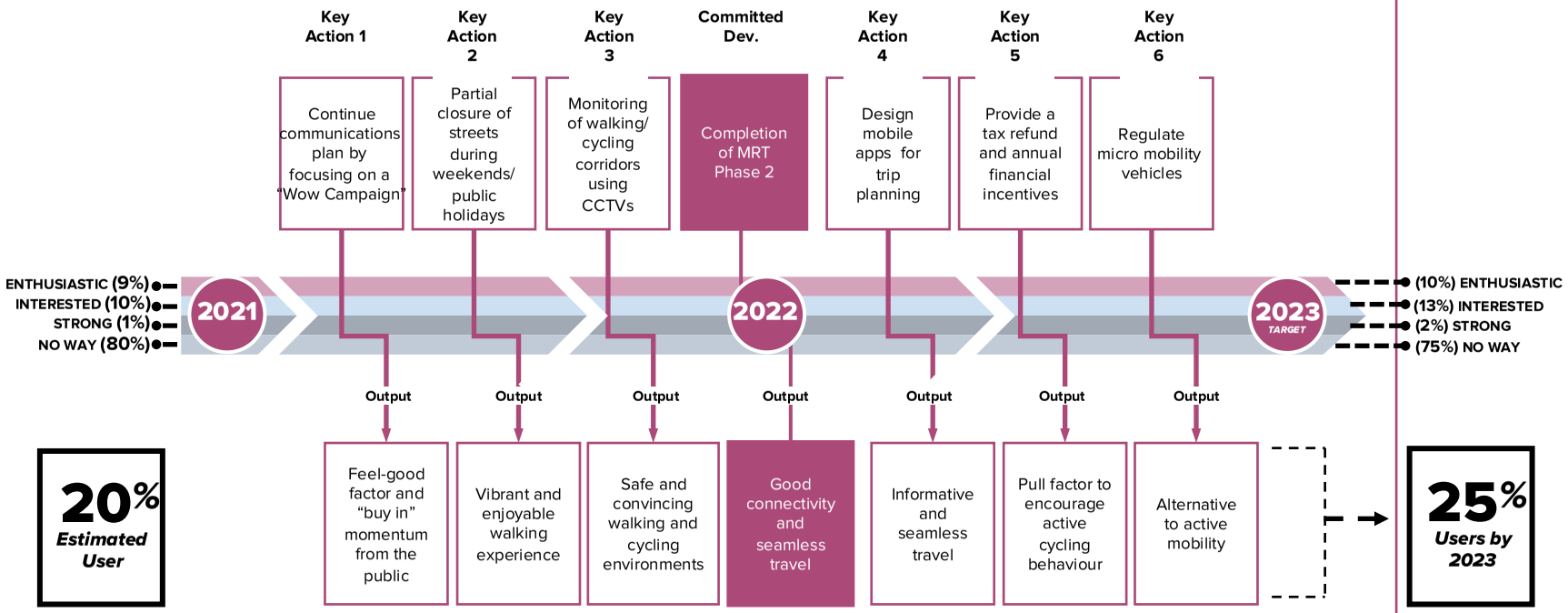
...cont.

STRATEGY	ACTION		KEY ASPECT	TARGET SEGMENTS				TARGET OUTPUT	
				EAC	IAC	SAF	NWNH	START	TARGET
P2-8	1.	To partner and incentivise companies to embark on financial reward schemes for employees who cycle to work.	Incentive	•	•	•	•	Q1/ 2023	• Start with 2-3 GLCs in Kuala Lumpur as a pilot test
	2.	To secure pledges from companies to implement an equal rights policy for transport claims for employees who cycle to work	Incentive	•	•	•	•	Q1/ 2023	• Start with 2-3 GLCs in Kuala Lumpur as a pilot test
	3.	To provide a tax refund to private companies that provide commuting allowances to their staff who actively cycle to work	Incentive	•	•	•	•	Q3/ 2023	• Enforced and announced by 2023
	4.	To encourage employers to provide annual financial incentives for employees to buy and repair bicycles	Incentive	•	•	•	•	Q3/ 2021	• Commenced by DBKL from 2021 onwards
	5.	To promote the use of regulated micromobility vehicles as a first mile/last mile alternative to walking and traditional cycling	Educational		•		•	Q3/ 2022	• None
	6.	To include e-scooters and other personal mobility devices into the list of items for tax exemption under the Lifestyle header	Incentive	•	•		•	Q3/ 2022	• Enforced and announced by 2022
P2-9	1.	To leverage on the Rentable Space Exemption for developers to provide shower rooms and lockers in new developments	Incentive			•		Q2/ 2021	• Get buy-in from at least 3-5 developers annually
	2.	To encourage employers to install CCTVs at 'black spots' to ensure the safety of their staff who cycle to work	Incentive			•		Q2/ 2023	• Get buy-in from 50-70% employers in 2023
	3.	To partner traders and shop owners in offering discounted meals/drinks to customers who cycle to work and take part in cycling competitions	Incentive	•	•	•	•	Q2/ 2021	• Get buy-in from at least 5-10 shop owners annually

EAC: Enthusiastic And Confident ***IAC:*** Interested And Concerned ***SAF:*** Strong And Fearless ***NWNH:*** No Way No How

Phase 2 Implementation Road Map and Projection

The time horizon for the medium term is three years, from 2021 to 2023. During this period, a further reduction of the No Way No How group is expected as several push and pull strategies are implemented. The completion of MRT Phase 2 is also expected to increase public transit usage. The proposed strategies and actions that are expected to lead to this change are summarised in the following figure.



Phase 3 Implementation Plan

Proposed implementation plan for phase 3 as shown in the following table

STRATEGY	ACTION		KEY ASPECT	TARGET SEGMENTS				TARGET OUTPUT	
				EAC	IAC	SAF	NWNH	START	TARGET
P3-1	1.	To celebrate active lifestyle by giving out annual awards to community driven walking and cycling initiatives	Incentive	•	•	•	•	Q1/ 2024	• Awarded to at least 2-3 communities
	2.	To apply big data analytics in evaluating and showcasing the positive impact of walking and cycling among the residents of Kuala Lumpur	Monitoring	•	•	•	•	Q1/ 2026	• Show all positive impact starting from 2026
	3.	To create healthy living campaigns and celebrate all things cycling and walking such as the Red Bull Million Mile Commute	Educational/ awareness	•	•	•	•	Q1/ 2024	• 1-2 campaigns annually
	4.	To collaborate with key opinion leaders (KOL) to inspire, educate and drive the branding of walking and cycling	Educational/ awareness	•	•	•	•	Q2/ 2024	• Identified at least 1 KOL every 2 years
	5.	To develop an app that scores users' performance by tracking their key commuting parameters involving walking and cycling	Facility	•	•	•	•	Q2/ 2025	• Launch the app in 2025
	6.	To use the app for organising fun competitions that offer weekly rewards to motivate users	Educational/ awareness	•	•	•	•	Q2/ 2025	• Participation in competitions from all user segments
P3-2	1.	To replicate community driven placemaking piloted at TTDI at the other residential zones	Placemaking	•	•	•		Q2/ 2024	• At least 2-3 residential zones annually
	2.	To expand full or partial pedestrianisation along vibrant streets in the residential zones as nodes for street activities	Enforcement	•	•		•	Q4/ 2026	• Starting along Jalan Bukit Bintang in 2026
P3-3	1.	To empower local resident associations through the use of IT in recording and reporting violations against pedestrians and cyclists	Safety	•	•	•		Q1/ 2027	• Empowered 3-5 communities annually
	2.	To establish a Community Surveillance Network (CSN) command centre that is linked to the individual monitoring centres in residential zones	Educational/ awareness	•	•			Q1/ 2027	• Established 3-5 communities annually
	3.	To apply big data analytics in anticipating and preventing violations against pedestrians and cyclists in a systematic manner	Safety	•	•	•		Q4/ 2026	• Fully utilised by end of 2027

EAC: Enthusiastic And Confident ***IAC:*** Interested And Concerned ***SAF:*** Strong And Fearless ***NWNH:*** No Way No How

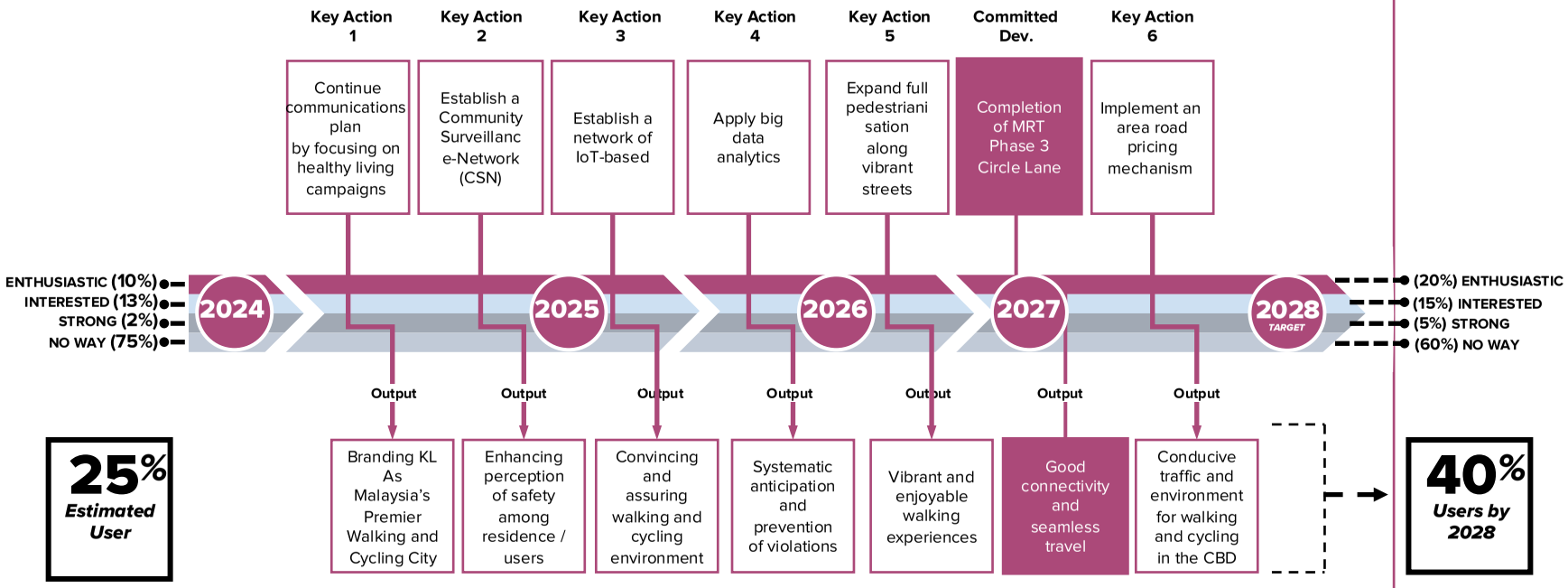
...cont.

STRATEGY	ACTION		KEY ASPECT	TARGET SEGMENTS				TARGET OUTPUT	
				EAC	IAC	SAF	NWNH	START	TARGET
P3-4	1.	To implement an area road pricing mechanism upon the eventual completion of MRT3 (Circle Line)	Enforcement				•	Q1/ 2028	• Started by 2028
	2.	To conduct quarterly user satisfaction surveys to improve the implementation of the area road pricing mechanism	Monitoring				•	Q1/ 2024	• Produced annual report of findings
	3.	To provide a comprehensive mobile app for trip planning and wayfinding to ensure seamless connectivity by public transportation	Facility	•	•		•	Q1/ 2025	• Launched the app by 2025
	4.	To increase public parking rates in the CBD area	Enforcement				•	Q1/ 2024	• Increased by 10% annually
	5.	To restrict the issuance of monthly or seasonal parking passes by progressively reducing the number of passes	Enforcement				•	Q2/ 2025	• Number of passes issued reduced by at least 10-20% each month
	6.	To reduce the parking requirement for new development close to public transit stations	Enforcement				•	Q2/ 2025	• Parking requirements reduced by 30-50%
P3-5	1.	To establish a network of Internet-of-Things (IoT) sensors to collect real-time information for trip planning and monitoring purposes	Monitoring	•	•			Q1/ 2027	• Fully utilised by end of 2027
	2.	To establish a network of IoT-based actuators that responds to input from sensors to support actuated cross-walk signal	Monitoring	•	•	•		Q3/ 2027	• Fully utilised by end of 2027
	3.	To establish a centralised communication centre that coordinates transit operation and emergency services	Safety	•	•	•		Q3/ 2027	• Fully utilised by end of 2027
	4.	To create a centralised Data Centre to analyse patterns of travel behaviour and overcrowding based on Big Data Analytics	Monitoring	•	•	•	•	Q1/ 2028	• Fully utilised by end of 2028

EAC: Enthusiastic And Confident ***IAC:*** Interested And Concerned ***SAF:*** Strong And Fearless ***NWNH:*** No Way No How

Phase 3 Implementation Road Map and Projection

The time horizon for the long term is five years, from 2023 to 2028. During this term, the No Way No How user group is expect to decrease further to comprise only 60% of users due to the implementation of higher impact enforcement policies such as area road pricing in the Kuala Lumpur CBD. The detailed projection and key enabling factors are shown in following figure:



‘Quick-Win’ Projects

‘Quick win’ projects are easy to implement with relatively low cost as well as having the potential of showing quick results to inspire users. ‘Quick win’ walking projects are related to improving safety and comfort at transit stations to enhance connectivity along the first mile/last mile continuum. Meanwhile ‘quick win’ cycling projects are in the form of the provision of parking racks for bicycles and expanding the painted bicycle lane. It should be highlighted, however, that success in implementing ‘quick win’ projects should not deviate attention from the more important medium and long term actions.

1

Provide bicycle parking racks at all Transit Stations in CBD

2

Enhance Fist Mile and Last Mile Facilities, Comfort, Safety and Connectivity at 12 Transit Stations in CBD

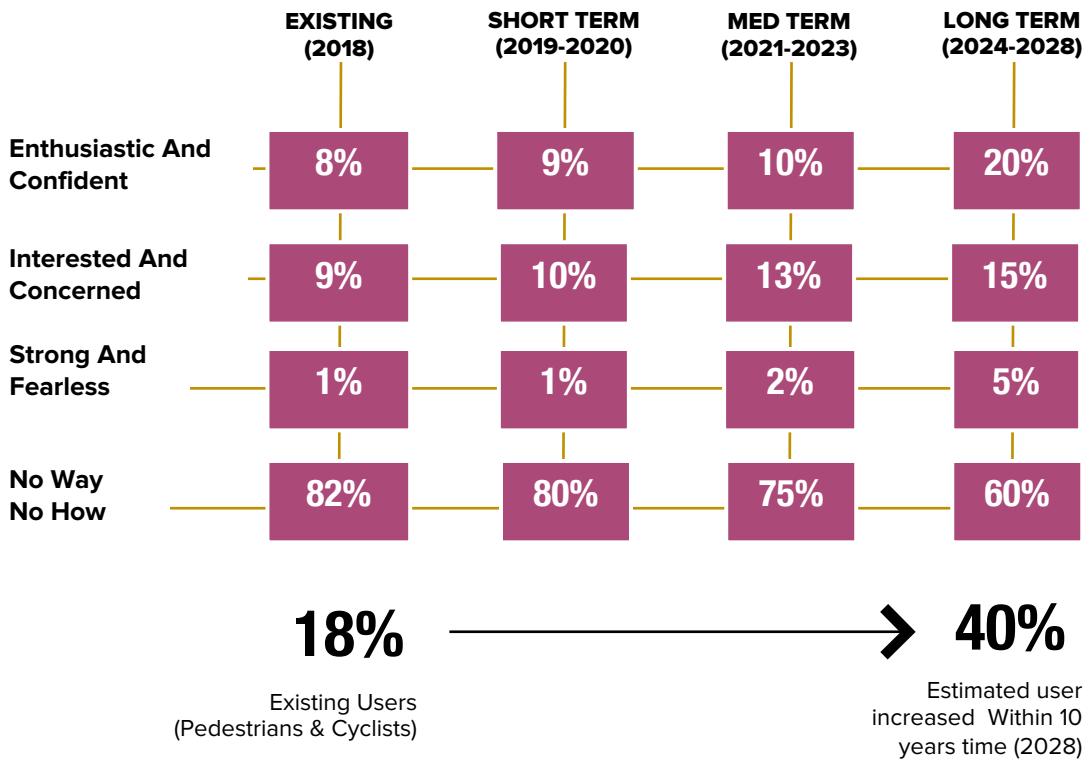
3

Enhance Existing Pedestrian Facilities Connecting Pavilion to TRX

Plan Monitoring

Progress monitoring and evaluation will take several forms for the purpose of plan performance measures and tracking of plan implementation. Performance measures will periodically monitor the progress in percentage participation of the public in walking and cycling on their way to achieve the targeted 40% participation by 2018. The monitoring will be done by target segments including school children, university students, office workers, shoppers, etc.

Tracking of plan implementation meanwhile serves to measure progress against benchmarks for the purpose of reviewing the effectiveness of particular interventions and policies, monitoring public opinion, reassessing strategies and actions of the plan and addressing unintended consequences of implemented actions



The achievement of the Plan's vision and goals will be monitored in intervals according to phase with milestones set at the end of each phase. Performance assessment would indicate the successes and failures of particular strategies or actions besides giving opportunities for improvement moving forward. Plan performance tells us whether we are successfully achieving the overarching plan's goal of 40% participation in active transportation by 2028.

Table 6-1 breaks down the detailed percentage increase in participation targeted for according to segments and target phases. The successful outcomes of the all the strategies and action laid out in the plan, once implemented, will be measured against these target increases in participation. In order to do this, a series of surveys have to be carried out on the targeted segments using the methods and intervals described in Table 6.2. Simple cross-sectional surveys or simple headcounts for selected samples are suggested for the first phase of the survey taking place in the short-term period of 2019-2020. During the mid-term phase of 2021-2023, it is suggested that survey is done using smartphone apps that would allow for longitudinal survey of volunteers to encourage wider survey participation, more detailed analysis and better accuracy. By the end of the long-term phase of 2024-2028, data would no longer come from survey but from big data analytics instead that allow for real time feed back and adaptive planning. This of course requires roles of many agencies including MIMOS, telcos DBKL.

Table 6-1: Target increase for different segments of pedestrians according to target year

Segment	Baseline (2018)	Target by 2020 (% Increase)	Target by 2023 (% Increase)	Target by 2028 (% Increase)
Overall	**18%**	**20% (2%)**	**25% (7%)**	**40% (22%)**
School Children	26.5%	29% (2.5%)	33% (6.5%)	43% (16.5%)
Univ. & College Students	27%	29% (2.0%)	33% (6%)	46% (19%)
Office Workers	15%	17% (2%)	22% (7%)	39% (24%)
Others (Shoppers, Visitors, etc.	15.5%	18% (2.5%)	23% (7.5%)	38% (22.5%)
Enthusiasts	1%	1.5% (0.5%)	2% (1%)	5% (4%)

Monitoring Schedule

The following table describes the detailed of monitoring schedule.

Table 6.2: Monitoring schedule

	ACTION / DEVELOPMENT	KEY ASPECT	START	MEASUREMENT	METHOD
1.	Review the effectiveness of the painted bicycle lane programme including its possible expansion within the CBD and residential zones	Infrastructure and facilities	Q3/ 2019	• Level of usage • Level of satisfaction	• User survey • Internet monitoring
2.	Remove impediments at transit stations (first mile last mile)	Infrastructure and facilities	Q4/ 2019	• Number of problem spots solved • Level of public satisfaction / appreciation	• Site Inventory • User survey • Internet monitoring
3.	Launching of KL Bike-Ped Communication plan	Educational	Q1/ 2020	• Delivery of message to public • Level of buy-in	• User survey • Internet monitoring
4.	To identify and implement physical retrofitting to improve the safety and comfort of existing pedestrian sidewalks and cycling lanes	Safety	Q1 / 2020	• Improvement level of safety and comfort • Level of satisfaction • Decreasing number of complaints and reports	• User survey • Internet monitoring • Data review / desk study
5.	Publicise efforts in making walking and cycling safer	Safety	Q2/ 2020	• Level of public confidence in walking and cycling	• Public survey • Internet monitoring
6.	Launching programmes of Mayor as a Cycling Brand Ambassador	Educational	Q2/ 2020	• Level of inspiration • Acceptance and response	• Public survey • Internet monitoring
7.	Pilot Utilisation of E-Scooter	Facilities	Q3/ 2020	• Impediments and challenges • Acceptance and response	• User survey • Internet monitoring
8.	Organise exciting cycling events for school children	Educational	Q3/ 2020	• Level of inspiration • Acceptance and response	• Public survey
9.	Installation of CCTVs at black spots	Safety and Enforcement	Q3/ 2020	• Level of public confidence in walking and cycling • Decreasing number of criminal at the spots	• Public survey • Data review / desk study
10.	E-scooters and other personal mobility devices into the list of items for tax exemption (LHDN) under the Lifestyle header	Incentive	Q4/ 2020	• Number of application	• Desk study / document review
11.	Launch TTDI Community Driven Project	Placemaking / Community Driven	Q1 / 2021	• Usage of facilities • Level of buy-in from residents	• Public survey
12.	Organise regular community based cycling events within residential zones	Educational	Q2 / 2021	• Level of inspiration • Acceptance and response	• Public survey

...cont.

	ACTION / DEVELOPMENT	KEY ASPECT	START	MEASUREMENT	METHOD
13.	Partial closure of vibrant street during the weekend	Placemaking	Q3/ 2021	• Level of usage • Acceptance and response (want to walk)	• Public survey
14.	Launch the intermediate phase of the communication plan focusing on wow campaign	Educational	Q4 / 2021	• Delivery of message to public • Level of buy-in	• User survey • Internet monitoring
15.	Appoint national sportsmen/women as a brand ambassadors	Educational	Q4 / 2021	• Level of inspiration • Acceptance and response	• Public survey • Internet monitoring
16.	Employers to provide annual financial incentives to buy and repair bicycle	Incentive	Q1 / 2022	• Level of application • Level of inspiration • Acceptance and response	• Interviews
17.	Designing and launching sophisticated and trendy mobility apps	Facility	Q2 / 2022	• Level of usage • Response on contents	• Data review • Internet monitoring
18.	Expand existing painted cycling lane network in city center to other neigbourhood / residential areas	Infrastructure and Facility	Q1 / 2023	• Level of usage • Response on contents	• Data review • Internet monitoring
19.	To launch one Project Per Community (exemplified TTDI Project)	Placemaking / Community Driven	Q2/ 2023	• Usage of facilities • Level of buy-in from residents	• Public survey
20.	Branding KL as a premier walking and cycling city	Educational	Q1 / 2024	• Delivery of message to public • Level of buy-in	• User survey • Internet monitoring
21.	Expand full pedestrianisation along vibrant streets	Placemaking	Q1/ 2025	• Level of usage • Acceptance and response	• Public survey
22.	Increase public parking rates in the CBD	Enforcement	Q1/ 2026	• Decreasing number of vehicles in city center	• Data review/ desk study

DEWAN BANDARAYA KUALA LUMPUR