

The background of the slide is white with several light green butterfly silhouettes scattered across it. The butterflies are in various sizes and orientations, some appearing as solid shapes and others as fainter, semi-transparent shapes.

Green City Initiatives:

For a Sustainable City Development in Kuala Lumpur

**City Planning
City Hall Kuala Lumpur
October 2016**

Cities



2%

of the earth's total land area



70% of Carbon Dioxide

75%

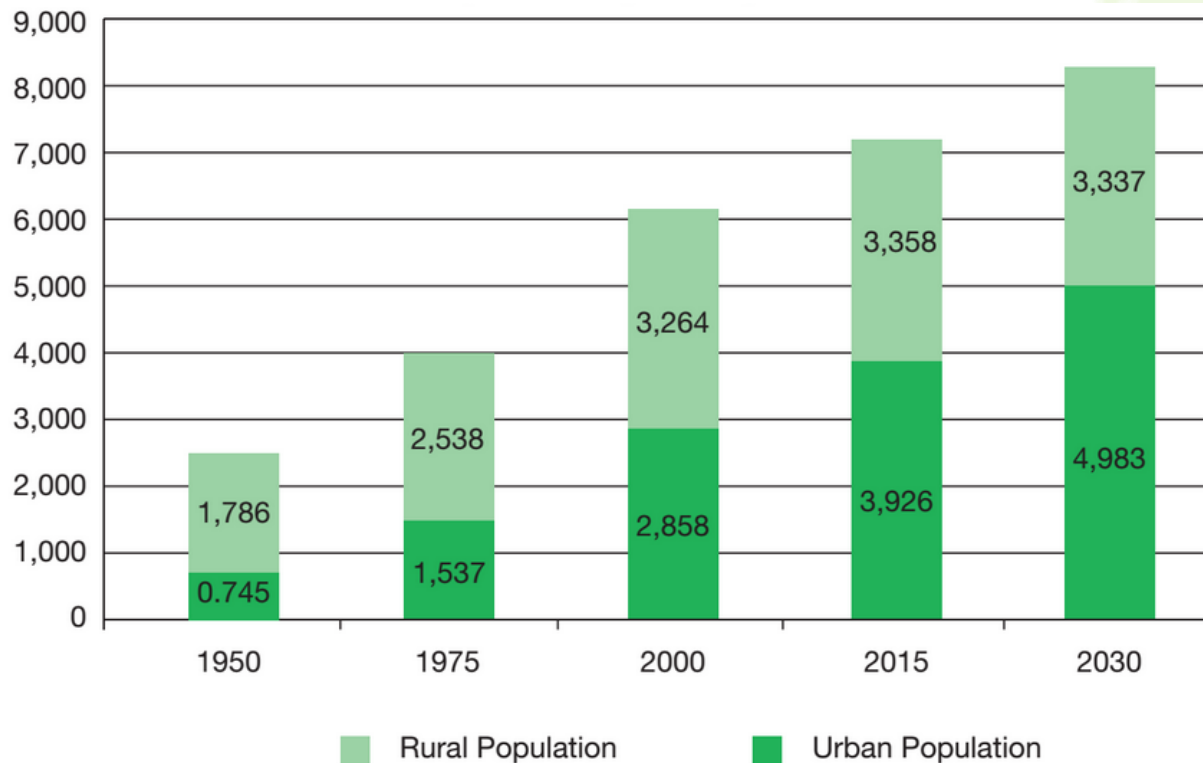
of total resource use



FOSSIL FUELS

55% of Asians: 2.7 billion people will live in urban areas by 2022

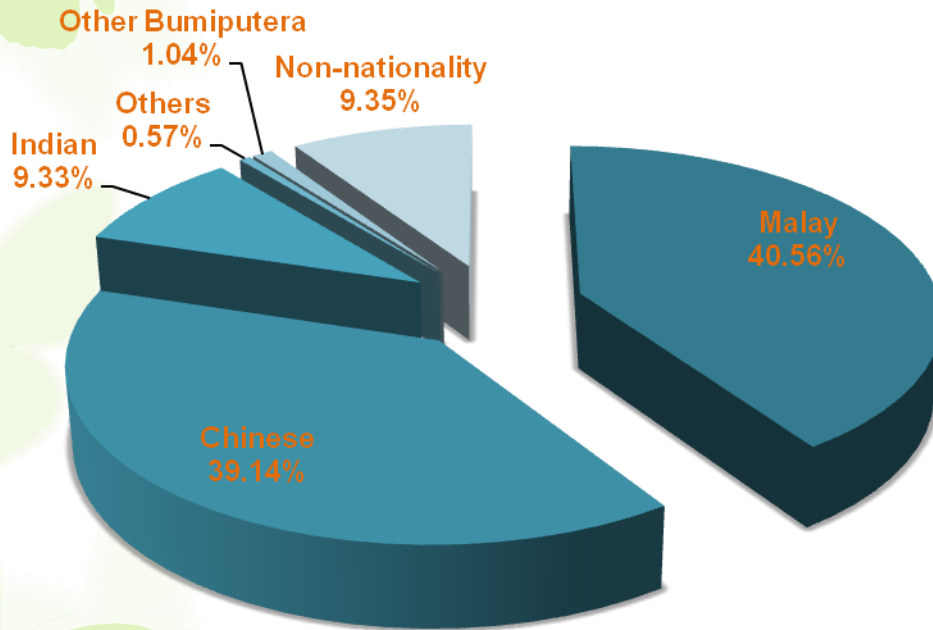
Urban vs. Rural Population Growth in Asia: 1950-2030 (billions of persons)



Source: United Nations, Department of Economic and Social Affairs, Population Division. 2012. World Urbanization Prospects: 2011 Revision, CD-ROM.



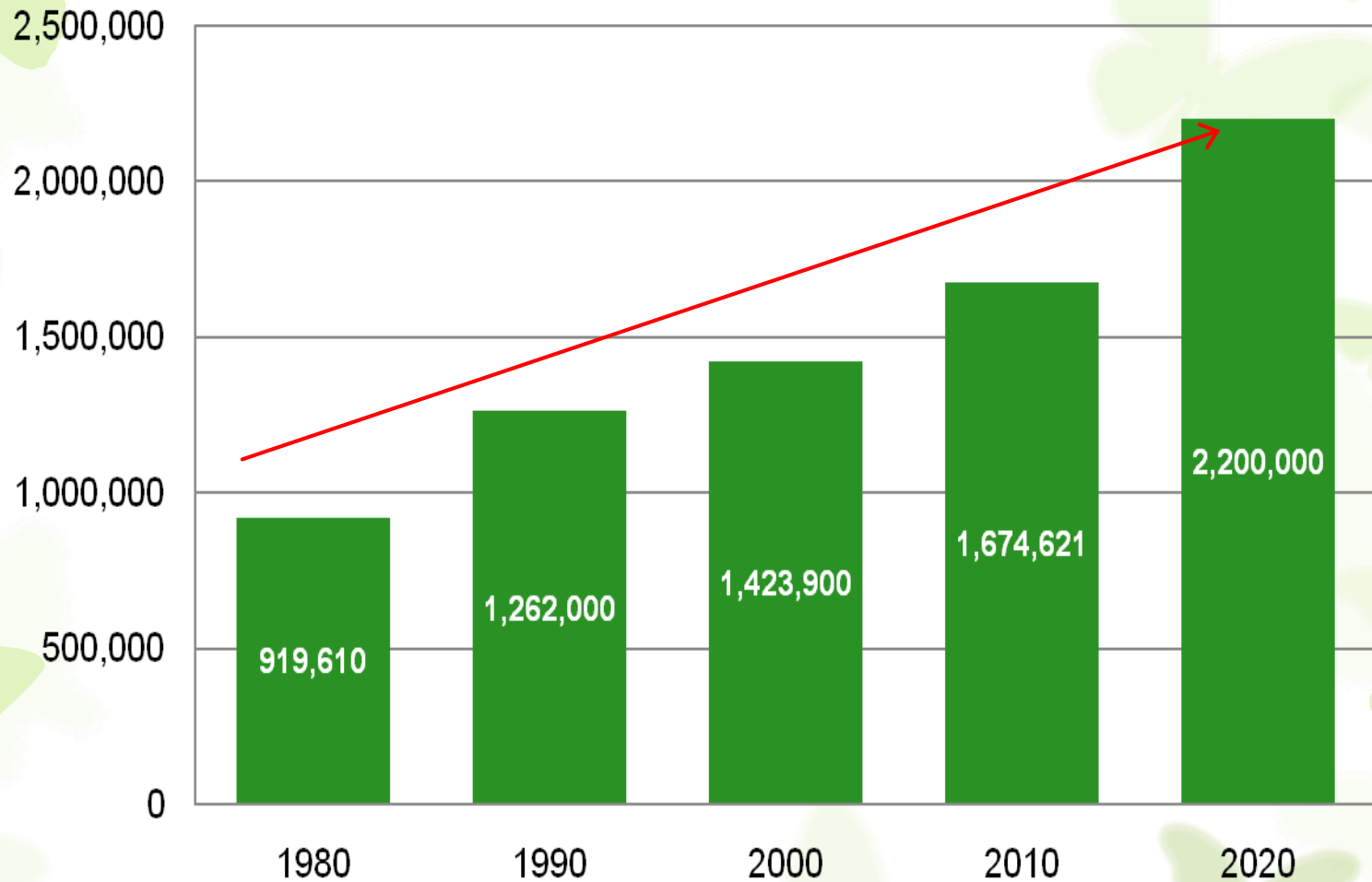
Kuala Lumpur Population 2010 (Demographic composition)



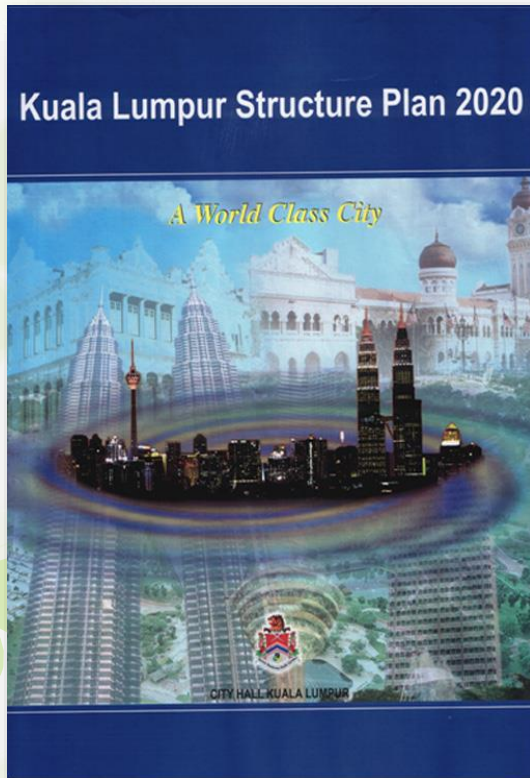
Kuala Lumpur Population 2010

RACE	POPULATION	PERCENTAGES (%)
Malay	679,236	40.56
Chinese	655,413	39.14
Indian	156,316	9.33
Others	9,539	0.57
Other Bumiputera	17,444	1.04
Non - Nationality	156,632	9.35
Total Population	1,674,621	100.00

KL Population 1998-2020



Kuala Lumpur Structure Plan 2020



VISION
Kuala Lumpur to be a
World Class City by 2020

**World
Class
BUSINESS
Environment**

**World
Class
WORKING
Environment**

**World
Class
LIVING
Environment**

**World
Class
GOVERNANCE**

To enhance the role of Kuala Lumpur as an international commercial and financial centre

To create an efficient and equitable city structure

To enhance the city living environment

To create a distinctive city identity and image

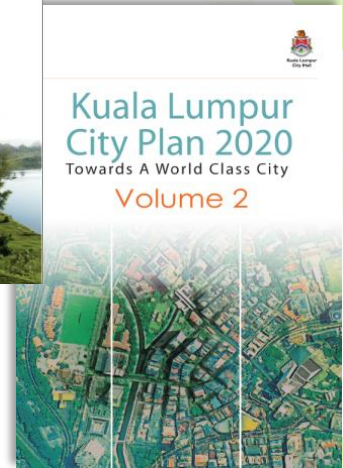
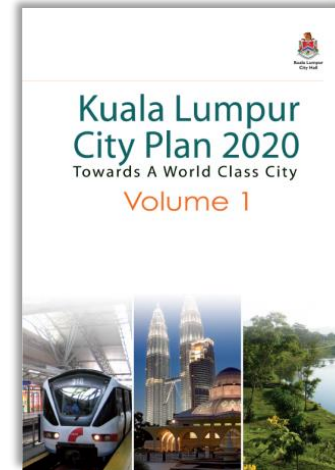
To have an efficient and effective governance

Kuala Lumpur City Plan 2020

8

Development Thrusts

1. Dynamic World Class Business City
2. Connectivity & Accessibility
3. Sustainable Land Use
4. City Living Environment
5. Protecting & Enhancing the Environment
6. Enhancing Green Network & Blue Corridor
7. Distinctive Image & Identity
8. Green Infrastructure



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Strategic
Directions



73

Key
Initiatives



Dynamic World Class Business City

3 STRATEGIC DIRECTIONS

9 KEY INITIATIVES

Strengthening Kuala Lumpur's Role as a World Class City

1. Enhancing the Premier Financial and Business Precincts
2. Developing an attractive Retail Clusters
3. Promoting International Urban Tourism

Accommodating Economic Growth Spatially

1. Sustaining and Enhancing Vitality of Urban Centres
2. Providing Sufficient Commercial Floor Area
3. Modernising and Integrating the Informal Sector
4. Enhancing Industrial Areas

Creating an Innovative City

1. Encouraging Up-scaling of Existing Economies
2. Encouraging ICT Clusters Through Development Of Cybercities and Cybercentres





Connectivity & Accessibility

3 STRATEGIC DIRECTIONS

15 KEY INITIATIVES

Building a More Sustainable, Integrated and Environmentally Friendly Transport Infrastructure

1. An integrated Transit Network
2. Extending Urban Rail Network With Regional rail Network
3. Integrated Transportation Terminal and Park & Ride Facilities
4. Developing Taxi Transformation Plan
5. Establishing Functional Road Hierarchy
6. Giving Priority to Buses

Moving Towards Travel Demand Strategies

1. Dispersing Peak-Period Traffic
2. Reducing SOV and Providing Incentives to Road Users
3. Restraining Traffic within City Centre
4. Managing Car Parking
5. Integrated Traffic Information System IT IS
6. Managing Heavy Vehicles

Integrating Developments with Pedestrian Connectivity

1. Providing a Safe and Comfortable Walking Environment for All Groups of Pedestrian Network Users
2. Improving Pedestrian Connectivity and Accessibility at Key Locations
3. Developing Cycling Routes and Facilities



City Living Environment



3 STRATEGIC DIRECTIONS

Meeting the People's Need for Housing

Promoting City Living That Will Create a Vibrant and Safe City

Providing for Quality Living Spaces

12 KEY INITIATIVES

1. Planning for Growth and Ensuring Adequate Housing Land
2. Providing Affordable Houses for the Middle Income and younger population in Strategic Location
3. Improving Quality of Existing Public Housing and Providing New Public Housing
4. Providing Housing for Special Groups

1. Encouraging Mixed Use Development within the City Centre
2. Protecting Stable Residential Areas as Established Housing (EH) for the City
3. Retaining Traditional Village and Preserving Their Characters

1. Distributing Residential Intensities for Sufficient Housing Provision
2. Adopting Safe Community Guidelines
3. Promoting Sustainable Principles of Neighborhood Planning
4. Providing quality and Sufficient Community Facilities



Protecting & Enhancing the Environment

4 STRATEGIC DIRECTIONS

Protecting Environmentally Sensitive Areas

Enhancing River Value and River Water Quality

Ensuring Safety and Best Use of Contaminated Sites

Improving Urban Environmental Quality

7 KEY INITIATIVES

1. Preserving Forest and Wildlife Reserves
2. Protecting Hill Land and Hillside
3. Preserving Lakes and Former Mining Ponds

1. Improving River Water Quality

1. Regulating Use of Former Landfill Sites

1. Managing Noise to Acceptable Level
2. Improving Air Quality



Enhancing Green Network & Blue Corridor

2 STRATEGIC DIRECTIONS

6 KEY INITIATIVES

Comprehensive Green Network for Greener Kuala Lumpur

1. Establishing Interconnected Green Network throughout Kuala Lumpur and Increasing the City's Green Density
2. Protecting Public Open Spaces and Maintaining Recreational Facilities
3. Securing Land for City's Green Areas
4. Providing Quality and Functional Recreational Facilities

River Corridor as the City's Waterfront Zone

1. Enforcing A Riverside Corridor Requirement in Development Applications
2. River as a Blue Connectors for the City



Distinctive Image & Identity



3 STRATEGIC DIRECTIONS

Enhancing and Strengthening City Character and Identity

A Vibrant City Centre

Conserving Built and Cultural Heritage

11 KEY INITIATIVES

1. Promoting Good Urban Design for New Developments and Redevelopments
2. Enhancing Character and Quality of Public Spaces
3. Creating Distinctive Urban Skyline between Centres
4. Encouraging Iconic Places and Landmarks Developments

1. Reinforce Kuala Lumpur's Structure Into a Coherent and Legible Pattern
2. Defining Kuala Lumpur's Capital City Function
3. Improving Physical Environment as Impetus for Regeneration
4. Kampong Bharu Regeneration as a Comprehensive Development Area

1. Protecting Heritage Zones, Sites and Buildings
2. Managing and Monitoring Heritage Zones and Buildings
3. Conserving Significant Traditional Villages and Intangible Heritage Value



Green Infrastructure



3 STRATEGIC DIRECTIONS

Providing Infrastructure and Utilities to Support Growth of the City

Mitigating Floods and Managing Stormwater

Addressing Climate Change by Encouraging Low Carbon Cities Initiatives

7 KEY INITIATIVES

1. Promoting A Coordinated Approach in the Provision of Infrastructure and Utility to Meet Future Requirements
2. Achieving Highest Reliability and Standard in Utility Provision

1. Implementing Kuala Lumpur's Drainage Master Plan
2. Managing Urban Storm water in A Sustainable Manner

1. Promoting Energy Efficient Development and Use of Green Technologies to Reduce City's Carbon Emission
2. Promoting Rain Water Harvesting, Recycling and Water Savings
3. Reducing Waste



Sustainable Land Use

3 STRATEGIC DIRECTIONS

Managing and Guiding Use of Land and Intensity of Development

Integrating Transport and Spatial Development

Redeveloping Previously Developed Sites and Regenerating Older Areas

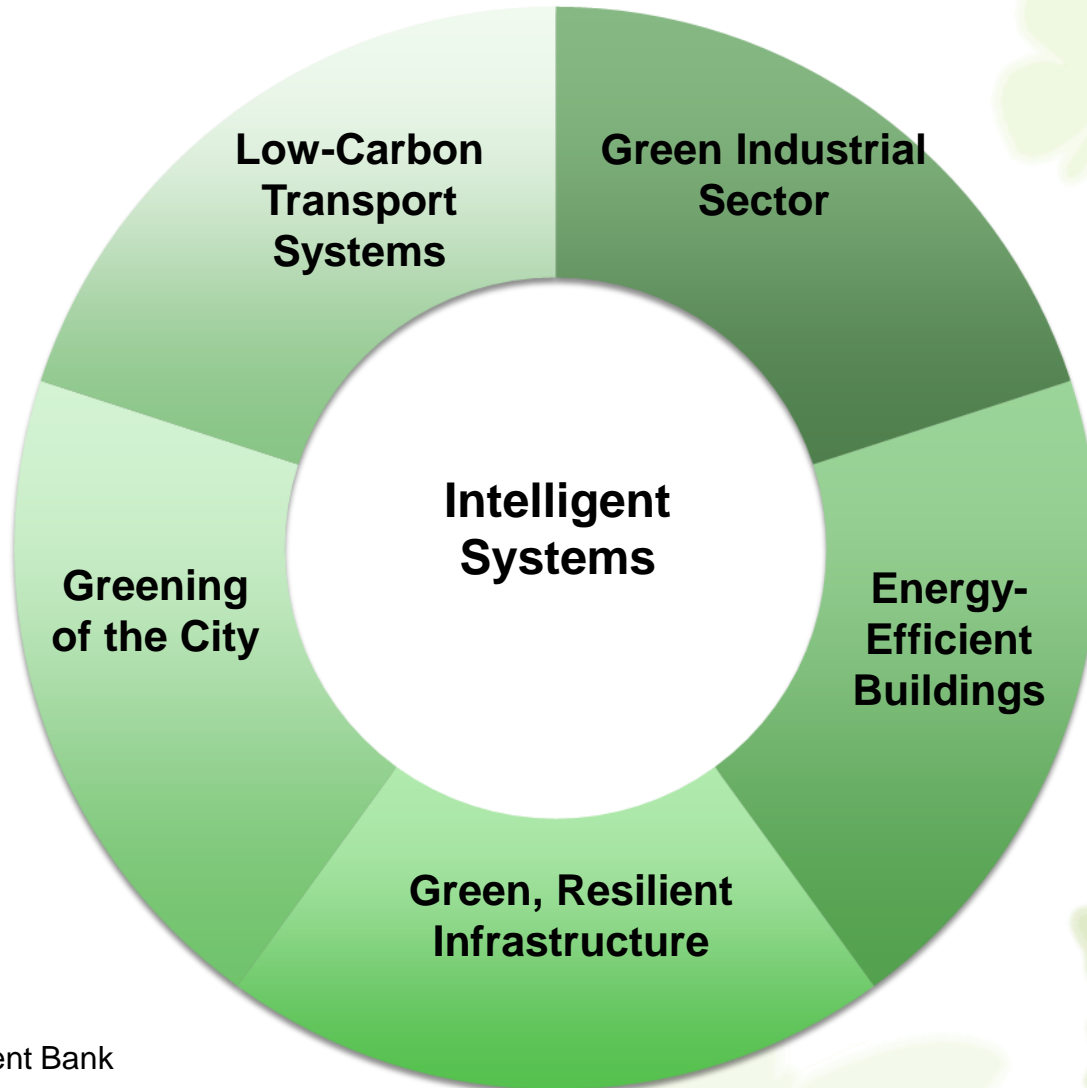
6 KEY INITIATIVES

1. Providing Clear Framework for Future Use of Land and Intensity of Development
2. Regulating Incompatible Land Use and Activities

1. Directing New Transit Corridors and Interchange Points to Priority Areas
2. Designating Transit Planning Zones
3. Encouraging Mixed Use Developments

1. Regenerating Older Areas
2. Redeveloping Previously Used and Under Utilised Land or Buildings

Smart Cities - Green Initiatives



The Case for Greening Cities

Economic Benefits

- Agglomeration economies i.e. provision of affordable housing near workplace/public transport
- Lower infrastructure and operating cost – go for public transport, cycling and walking
- Reduced congestion cost – fuel and parking fee

Social Benefits

- Job creation and employment opportunities
- Poverty reduction and social equity
- Improvement in quality of life - provision of public parks and tree planting programs
- Reduced crime rates and improved public safety thru CPTED concept in urban design

Environmental and Health Benefits

- Reducing pollution and improving public health i.e. non fuel vehicle
- Ecosystem services and risk reduction i.e. Open spaces, parks, vegetation and landscapes help reduce risk exposure to flooding and land slide
- Implementation of GBI lower energy consumption for buildings

Greening Urban Sectors: KL Initiatives

- Rail System
- Bicycle lane
- Bus system
- Pedestrian Network

Transport



- Green Building Index (GBI)

Buildings



- Energy-efficient Buildings
- Euro 5 NGV for Public Transport

Energy



- Open spaces
- Tree planting
- Vertical green
- Community garden
- Preserving Forest

Environment



- River of Life
- Rain water harvesting

Water



- Reduce, Reuse, Recycle (3R) program

Waste



- (Integrated Transport Information System) ITIS

Infrastructure and Digital Technology



KL Initiatives: Transport

Rail System

Mass Rapid Transit (MRT)

- MRT1 – Sg. Buloh-Kajang Line (51 km) – Phase One will become operational by the end of 2016
- MRT2 – Sg. Buloh-Serdang-Putrajaya Line (59.5 km)
- MRT3 – Circle Line



Light Rapid Transit (LRT)

- LRT1 – Ampang Line (27 km) – 18.1 km to Putra Heights is under construction
- LRT2 – Kelana Jaya Line (29 km) – 17.4 km to Putra Heights is under construction
- Ridership – 190,000 people per day

KL Monorail Line

- 8.6 km
- Ridership – 75,000 people per day

KL Initiatives: Transport

Rail System

Express Rail Link (ERL)

- KLIA Express (57 km) - non-stop airport rail link service
- KLIA Transit (57 km) - commuter rail service
- Ridership 6,200 per day



KTM Komuter

- Port Klang Line (45 km)
- Seremban Line (105 km)
- Ridership 51,200 per day

Tramline in KL City Centre

- Proposed in Urban Design Guideline, KL City Centre
- Total length of 18.5 km

KL Initiatives: Transport

Bus System

Rapid Bus

- Currently, there are 165 routes which integrates with Klang Valley's Rail Systems
- Providing services to more than 1,000 residential areas in Klang Valley and Selangor, RapidKL operates more than 800 buses daily with a ridership of more than 300,000 passengers per day.



Go KL City Bus

- The Go KL City Bus service was introduced in 2012 to improve public transport within city centre
- Go KL is a free bus service which is designed to function as a feeder bus service providing last-mile connectivity integrating other modes of public transport.
- There are four lines:
 - Green Line : KLCC – Bukit Bintang (14 stops / 45 mins)
 - Purple Line : Pasar Seni – Bukit Bintang (15 stops / 60 mins)
 - Blue Line : Medan Mara – Bukit Bintang (17 stops / 45 mins)
 - Red Line : KL Sentral – Jalan Tuanku Abdul Rahman (19 stops / 60 mins)

Proposed Bus Rapid Transit (BRT)

- From Pasar Seni to Klang
- Total length of 32 km

KL Initiatives: Transport



Bicycle Lane

- 5.5 km dedicated bicycle lane from Dataran Merdeka to Mid Valley
- Proposed dedicated bicycle lanes in city centre:
 - LRT Station Taman Melati to LRT Station Wangsa Maju (2.1 km)
 - Kg. Batu Muda – Taman Metropolitan Batu (2.0 km)



Pedestrian Network

- Comprehensive pedestrian network with anti climb fence with landscaping, barrier free and handicapped-friendly
- Completed pedestrian network by year:
 - 2011 (12.60 km)** – Jalan Raja Laut, Jalan P. Ramlee, Jalan Tuanku Abdul Rahman, Jalan Sultan Ismail
 - 2012 (13.37 km)** – Jalan Raja Laut – Jalan Ipoh, Jalan Ampang – Jalan Sultan Ismail, Jalan Bukit Bintang, Jalan Raja Chulan, Jalan Tung Shin, Jalan Pudu
 - 2013 (12.80 km)** – Part of Jalan Ipoh, Jalan Pahang, Jalan Tun Razak, Jalan Raja Muda Abdul Aziz, Jalan Dr. Latiff, Jalan Binjai, Persiaran KLCC, Jalan Kia Peng, Jalan Tun Razak, Persiaran Stonor, Jalan Dang Wangi, Jalan Conlay, Jalan Khoo Teik Ee, Jalan Melati, Jalan Horley, Jalan Pahang Barat
 - 2014 (12.70 km)** – Jalan Sultan Ismail, Changkat Raja Chulan, Changkat Bukit Bintang, Jalan Hang Jebat, Jalan Imbi, Jalan San Peng

KL Initiatives: Buildings



Green Building Index (GBI)

- Designed to save energy and resources, recycle materials and minimise the emission of toxic substances throughout its life cycle.
- As of April 2015, the numbers of GBI Certified Buildings in Kuala Lumpur is 105 which include residential and non- residential buildings.

KL Initiatives: Energy



Energy-efficient Buildings

- Greenhouse gas emissions from buildings could be reduced by integrating affordable designs to maximise energy efficiency and minimise waste
- Energy-efficient building is one of the criteria needed to be a Certified GBI Building.
- Currently, there 105 Certified GBI Buildings in Kuala Lumpur



Euro 5 NGV for Public Transport

- Use of cleaner Euro 5 NGV for Go KL City Buses reduce the greenhouse gas emissions

KL Initiatives: Environment

Open Spaces



- An integrated park system will be created to include parks of all sizes, landscaped boulevards and paths and public open spaces, where different open spaces in the city are connected through green trails.
- DBKL through initiative in Urban Design Guidelines will create Green Pedestrian Walkways connecting Perdana Botanical Garden with Merdeka Square, Petaling Street, Bukit Bintang and KLCC
- As of December 2014, there are 2266.65 hectares of public open spaces in Kuala Lumpur with 997.09 hectares have been gazetted.

Tree Planting Programme



- DBKL aims to plant 30,000 trees around Kuala Lumpur per year, or 100,000 trees by 2020, to achieve the goal of Greener KL to provide 14m² per person for Kuala Lumpur citizens.
- In 2014, DBKL has planted 39,636 trees. Between 2011 and 2014, 135,734 trees have been planted which is well exceeded the target for 2020.

Vertical Green



- DBKL aims to employ creative landscaping methods including dense rooftop greening and vertical landscaping. DBKL will extend its current tree planting initiatives from 30,000 trees to 100,000 trees
- Through rooftop greening, 150,000 square meters of unused rooftops in KL city can be leveraged to increase green space that can generate up to

KL Initiatives: Environment

Community Garden



- DBKL through Local Agenda 21 has been promoting and implementing community garden in Kuala Lumpur involving Residents Associations as well as private sectors.
- Currently, there 2 Community Gardens that have been implemented in KL which is Taman Herba LA21 KL Sg. Midah and PPR Air Panas

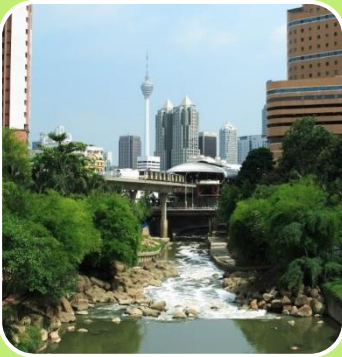
Preserving Forest



- Hutan Simpan Bukit Nanas (10.5 hectares) – Gazetted as Wildlife and Bird Sanctuary in 1934
- Hutan Simpan Bukit Sungai Puteh – Gazetted as Wildlife Reserve in 1932
- Hutan Simpan Bukit Sungai Besi (42.29 hectares)
- Hutan Simpan Bukit Lagong Tambahan (2.10 hectares)

KL Initiatives: Water

River of Life



- Master planning and beautification works that will be carried out along a 10.7km stretch along the Klang and Gombak river corridor
- River cleaning project aims to clean and improve the 110km stretch along the Klang River basin from current Class III-V to Class IIB by 2020
- Cleaning and beautification works will spur economic investments into the areas immediately surrounding the river corridor

Rainwater Harvesting



- Rain water is harvested to help conserve water in the building and to reduce the use of treated water from the utility that can be applied to the cooling system condenser as well as being used to water the landscape and for general cleaning purposes.

KL Initiatives: Waste

Reduce, Reuse, Recycle (3R) Program



- Greater KL/KV will face major solid waste management (SWM) problems given current practices as solid waste generation per day in Greater KL/KV is expected to grow from 10kton to 17kton by 2020. Current limited sanitised landfills capacity, low recycling rates of 11%, lack of proper system for disposal of construction and demolition waste (C&D) need to be addressed
- Greater KL/KV EPP recommends the enhancement of the Reduce, Reuse, Recycle (3R) implementation by creating a recycling ecosystem to stimulate waste disposal reduction and to target a recycling rate of 40% by 2020 from current target of 22%.
- In 2014, out of 629.98 kilotons solid waste that been collected by Alam Flora, only 0.1 kiloton were recycled.

KL Initiatives: Infrastructure and Technology

Integrated Transport Information System (ITIS)

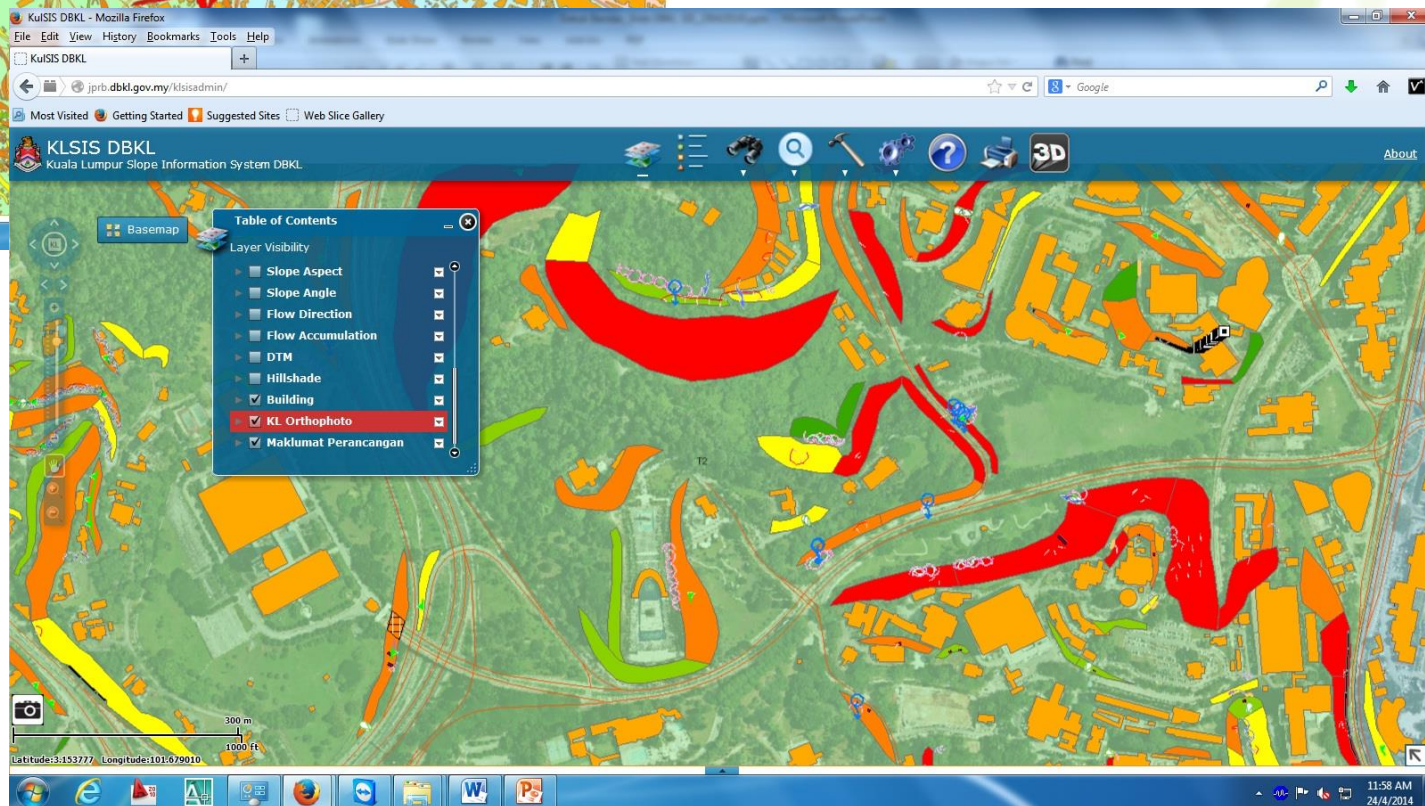
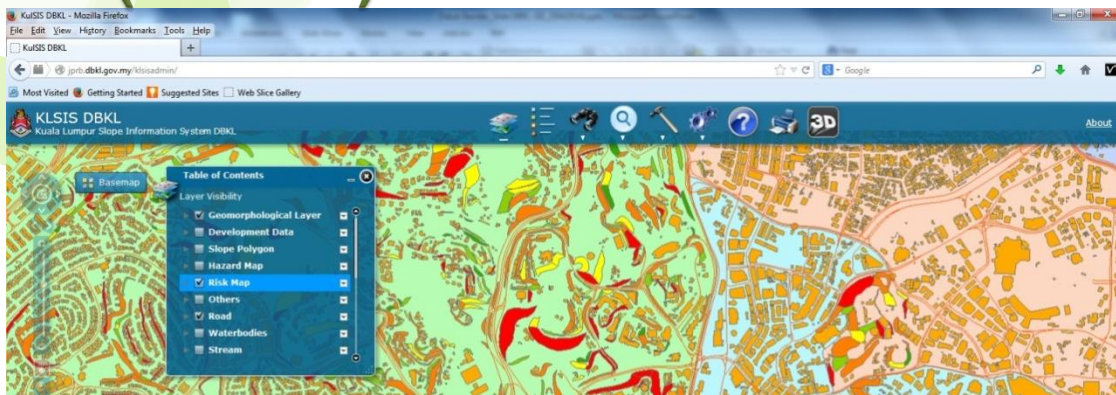
- A comprehensive traffic information system developed to monitor traffic flow and analyse the data on road conditions in the Klang Valley to provide useful traffic information to road users.
- A total of 1,200 CCTV's being used to better manage traffic as well as for crime prevention.
- ITIS covers 45 main road corridors within the Klang Valley that includes the Inner Ring Road (Jalan Raja Chulan), the Middle Ring Road 1 (Jalan Tun Razak), the Middle Ring Road 2, and major radials such as Federal Highway Route 2, Jalan Ampang, Jalan Sentul, KL-Seremban expressway etc. In total, there will be over 200 kms of roads which will be monitored.



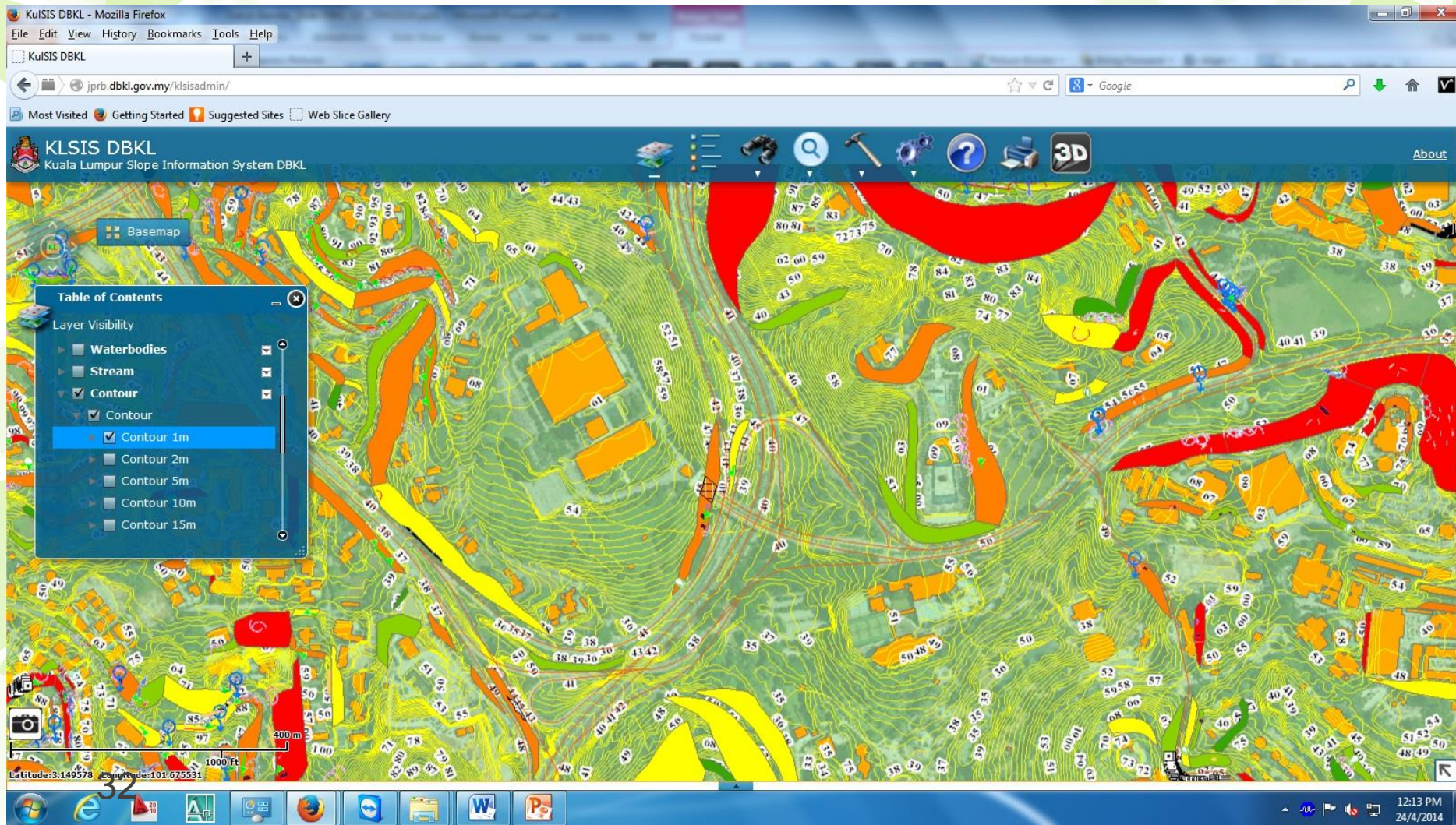
Slope Hazard And Risk Map Kuala Lumpur (KLSIS)

The image displays the KLSIS (Kuala Lumpur Slope Information System) interface. It includes a navigation menu with 'ADMINISTRATOR', 'MANAGEMENT', and 'OPERATION' tabs. A central banner features the KLSIS logo and the text 'Kuala Lumpur Slope Information System' and 'Welcome to KLSIS'. Below this is an 'Administrator Login' form with fields for 'Username' (filled with 'KETUA PENGARAH') and 'Password', and a 'Login' button. The main interface shows a map of Kuala Lumpur with a 'Table of Contents' panel listing layers: Geomorphological Layer, Development Data, Slope Polygon, Hazard Map, Risk Map, Others, Road, Waterbodies, and Stream. The map displays a hazard map with regions labeled T1, U1, U2, T2, T3, T4, S1, S2, and S3. The interface also includes a 'BaseMap' button, a '3D' button, and a scale bar at the bottom.

3. Slope Hazard And Risk Map Kuala Lumpur (KLSIS)



3. Slope Hazard And Risk Map Kuala Lumpur (KLSIS)



The background of the slide is white and features a decorative border of green butterfly silhouettes. The butterflies are scattered around the edges, with some appearing more prominent than others. The text "Thank You" is centered in the middle of the slide in a large, bold, black font.

Thank You