



THE MALAYSIA SMART CITY INITIATIVES ON GREEN TRANSFORMATION

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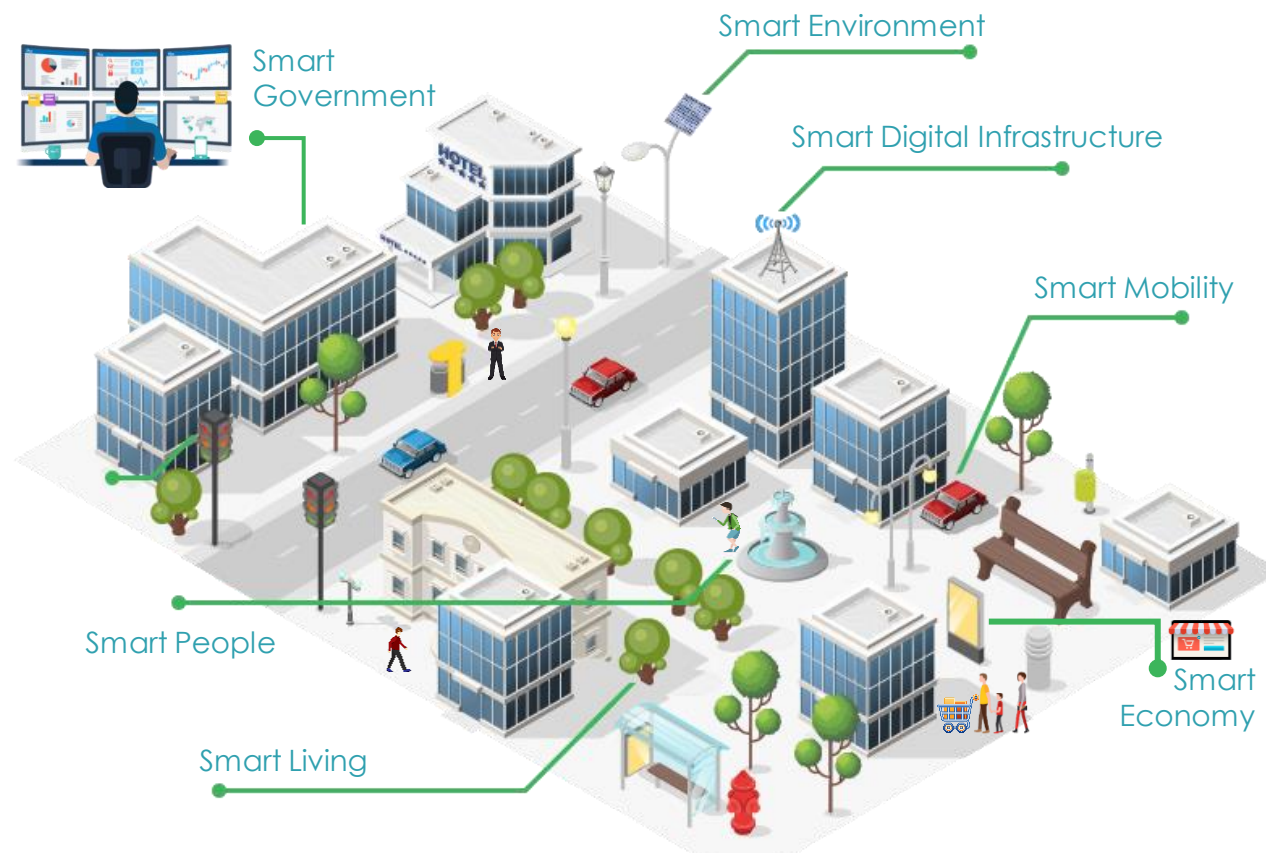
MALAYSIA SMART CITY FRAMEWORK (MSCF) 2019-2025



To guide and as a reference to local governments (city managers), state governments, federal ministries and departments, industry players and other stakeholders in the **PLANNING AND DEVELOPMENT OF SMART CITIES IN MALAYSIA**

Source : Malaysia Smart City Framework 2025

**2026 – 2040:
MALAYSIA SMART CITY BLUEPRINT**



Vision MySmart City – Quality and Smart Living

 **16**
Policy

 **36**
Strategy

 **112**
Initiatives

 **92**
Indicator

SMART CITY COMPONENTS

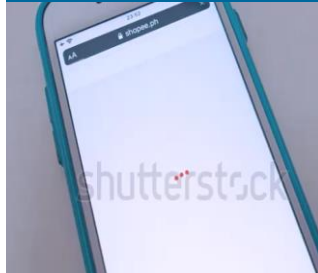
Malaysia Smart City Framework 2019 – 2025 KPKT

1 SMART GOVERNMENT



- Open Data.
- Digitalisation and Quality of Service.
- Interagency Data Sharing.

2 SMART ECONOMY



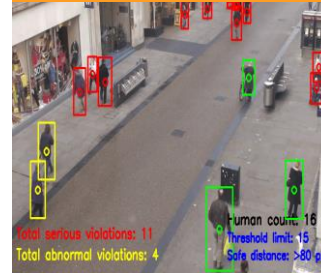
- High Productivity
- Economic Innovation
- Usage of ICT
- Competitive & Appealing Economic Investment

3 SMART PEOPLE



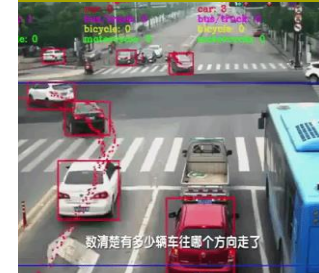
- Community Empowerment.
- Talented and Skilled Human Capital.
- Good Moral Values.
- First-class Mentality.

4 SMART LIVING



- Urban Safety and Security.
- High-quality Healthcare Services.
- High-quality of Life in Residential.

5 SMART MOBILITY



- Seamless & Efficient Connectivity.
- Integrated, Safe Roads & Public Transport.
- Sustainability / Green Mobility.

6 SMART ENVIRONMENT



- Environmental Protection & Clean Environment.
- Sustainable Resource Management.
- Resilient Low Carbon City & Green Lifestyle.

7 SMART DIGITAL INFRA



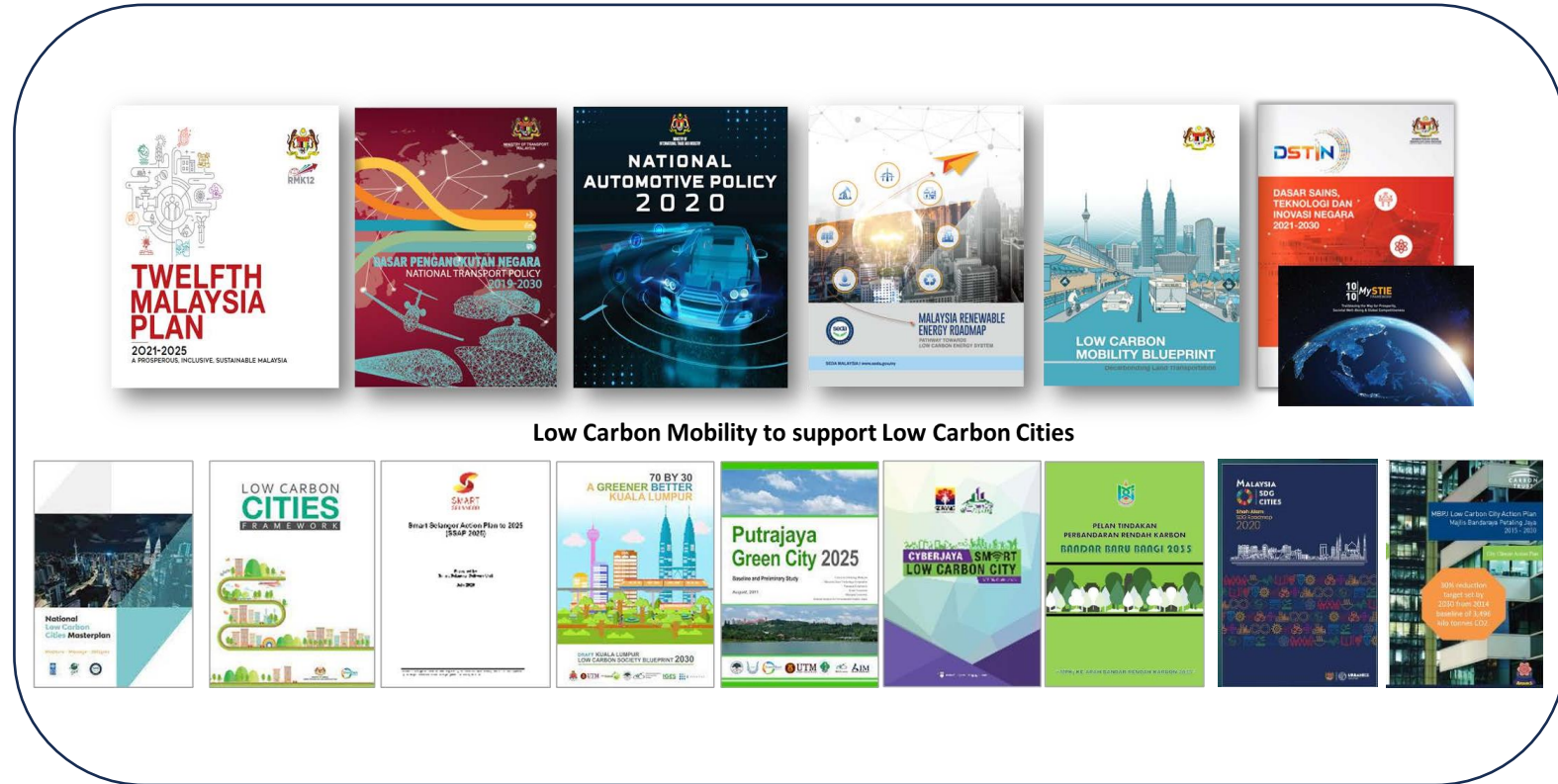
- Network Coverage & Quality of Service.
- High-speed Internet.
- Personal Data Protection - Cyber Security.

Smart Cities Can Be A Significant Transition Towards Green Transformation (GX)

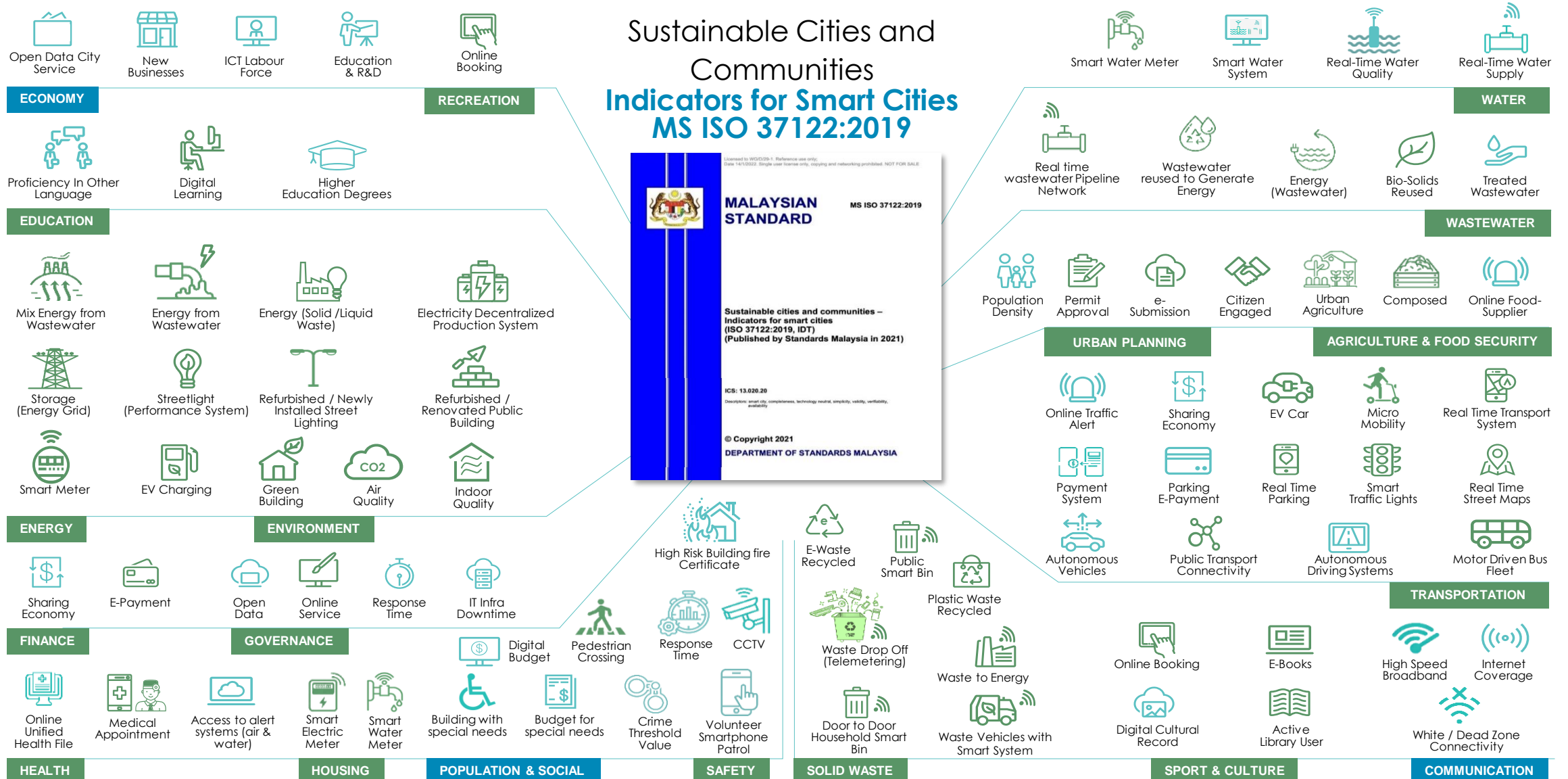


By integrating advanced technologies, data analytics, and sustainable urban planning, smart cities aim to enhance energy efficiency, reduce carbon footprints, and promote environmentally friendly practices.

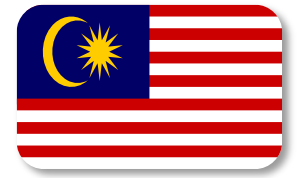
Malaysia have identified SMART CITIES as one of the vehicles towards Green Transformation (GX)



MS ISO 37122:2019 - INDICATORS RELATED TO GREEN INITIATIVES



SMART CITY IMPLEMENTATION ON GREEN TRANSFORMATION IN MALAYSIA (BY LOCAL GOVERNMENT)



GEORGETOWN



Penang Island City Council (MBPP)

Project: Smart Parking System

Overview: The smart parking system reduces traffic congestion and pollution by optimizing parking availability using IoT solutions.

Green Aspects: Reduction in vehicle emissions through less time spent searching for parking, coupled with promoting alternative modes of transport such as cycling and walking.

IPOH



Ipoh City Council

Project: Smart Traffic Light for Smart Low Carbon City

Overview: The city have worked with Telekom Malaysia on providing smart traffic light as one of smart city solution aims to reduce waiting time and improve traffic mobility across the city.

Green Aspects: Optimize travelling time up to 51% and reduce carbon emission 7,500 tonne a month

CYBERJAYA



Sepang Municipal Council (MP Sepang)

Project: Low-Carbon City Framework

Overview: Cyberjaya is designed as a tech-centric smart city, with strong emphasis on green technology, energy efficiency, and smart infrastructure.

Green Aspects: Solar-powered streetlights, waste-to-energy systems, smart building designs, and a cycling-friendly urban design.

PUTRAJAYA



Putrajaya Corporation (PPj)

Project: Green City Initiative

Overview: As the federal administrative center, Putrajaya aims to become a low-carbon city through initiatives like energy-efficient buildings, sustainable transport (electric buses), and expansive green spaces.

Green Aspects: Incorporation of eco-friendly public transportation, green roofs, and urban parks to reduce carbon footprint and enhance urban greenery.

KUALA LUMPUR



Kuala Lumpur City Hall (DBKL)

Project: River of Life (RoL)

Overview: A key urban regeneration initiative aimed at transforming the Klang River into a vibrant and sustainable waterfront, integrating green infrastructure, improving water quality, and promoting walkability and public spaces.

Green Aspects: Emphasis on creating eco-friendly public spaces, promoting low-carbon transport options, and enhancing the biodiversity of urban rivers.

KUANTAN



Kuantan Municipal Council (MPK)

Project: Smart Green City Vision

Overview: Kuantan is positioning itself as a green and smart city, with projects focused on renewable energy, sustainable waste management, and improving public infrastructure.

Green Aspects: Solar-powered streetlights, electric buses, green public spaces, and waste recycling initiatives as part of its Low Carbon City framework.

JOHOR BAHRU



Iskandar Regional Development Authority (IRDA)

Project: Smart City Green Initiatives

Overview: Iskandar Malaysia has been actively developing smart city initiatives, focusing on sustainable urban mobility, energy-efficient buildings, and green growth strategies.

Green Aspects: Implementation of electric buses, smart grids, green buildings certified under the Green Building Index (GBI), and waste management projects.

KOTA KINABALU



Kota Kinabalu City Hall (DBKK)

Project: Integrated Public Transport System & Integrated Solid Waste Management

Overview: Kota Kinabalu's focuses on integrating green technology in urban development, improving waste management, and enhancing public transport services.

Green Aspects: The city has introduced smart waste management solutions, clean energy initiatives, and plans for green public transport systems, including the possibility of electric buses and more cycling lanes.

SARAWAK

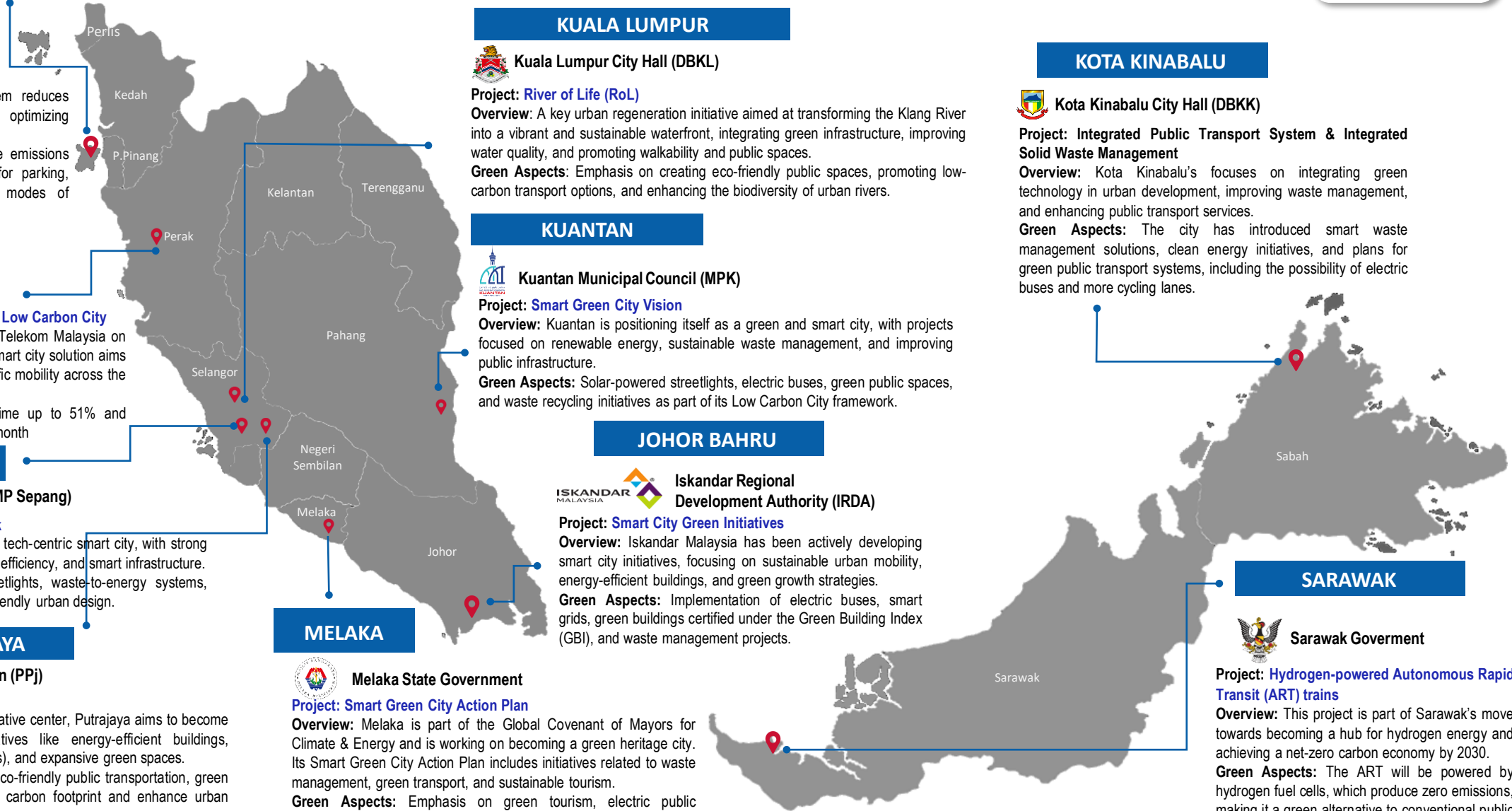


Sarawak Government

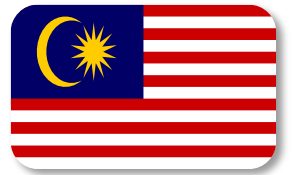
Project: Hydrogen-powered Autonomous Rapid Transit (ART) trains

Overview: This project is part of Sarawak's move towards becoming a hub for hydrogen energy and achieving a net-zero carbon economy by 2030.

Green Aspects: The ART will be powered by hydrogen fuel cells, which produce zero emissions, making it a green alternative to conventional public transport systems.



SMART CITY IMPLEMENTATION ON GREEN TRANSFORMATION IN MALAYSIA (BY PROPERTY DEVELOPER)



1 BANDAR MALAYSIA



Project: Green and Smart City Vision
Overview: Bandar Malaysia is envisioned as a smart and green township with a focus on sustainability and cutting-edge technology. It will be Malaysia's next integrated transportation hub, offering a transit-oriented development (TOD) with green infrastructure.
Green Aspects: Emphasis on green buildings, energy-efficient designs, and sustainable transport modes such as electric trains, cycling, and pedestrian networks.

2 KWASA DAMANSARA TOWNSHIP



Overview: A new urban township in Sungai Buloh, Kwasa Damansara integrates green technologies and smart solutions, aimed at becoming a transit-oriented and eco-friendly township.
Green Aspects: Sustainability-driven, focusing on energy-efficient buildings, public green spaces, and integration of smart transport solutions such as electric buses.

3 SETIA ECO TEMPLER



Overview: A green and smart township located in Rawang, designed with eco-friendly homes and environmental conservation in mind. Setia Eco Templer blends smart city solutions with natural landscapes and sustainability efforts.
Green Aspects: Energy-efficient homes, rainwater harvesting systems, and landscape preservation that includes natural rivers and forests.

4 ECO ARDENCE BY ECOWORLD



Overview: Located in Setia Alam, Eco Ardence is a sustainable township offering eco-friendly homes with smart features. It aims to combine green living with smart city technologies.
Green Aspects: Eco-friendly housing with green roofs, smart lighting systems, solar energy solutions, and dedicated green spaces to promote a healthy lifestyle and sustainable community.

5 ELMINA



Overview: The City of Elmina is a township development in Shah Alam focused on wellness and sustainability, incorporating green technologies and eco-friendly practices.
Green Aspects: Energy-efficient homes, water conservation strategies, large green spaces, and smart traffic management. The township also includes features that promote biodiversity and sustainable community living.

6 GAMUDA COVE



Project: Sustainable Township Development
Overview: Gamuda Cove focuses on creating a sustainable township by blending smart technologies with environmental conservation, including wetland parks and smart homes.
Green Aspects: Use of solar energy, energy-efficient homes, and integration with natural ecosystems for environmental sustainability.

7 SETIA ECO GLADES

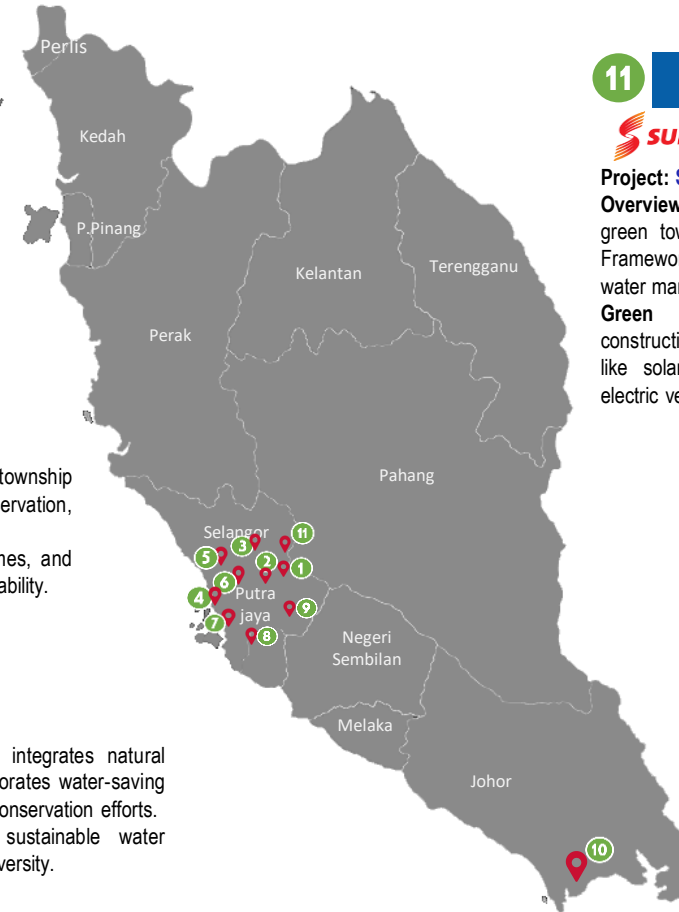


Overview: Setia Eco Glades is a green township that integrates natural landscapes and sustainable housing development. It incorporates water-saving technologies, green architecture, and extensive biodiversity conservation efforts.
Green Aspects: Emphasis on eco-friendly housing, sustainable water management, and extensive landscaping that promotes biodiversity.

8 GREENTECH CYBERJAYA



Overview: Cyberjaya 2.0 aims to be a low-carbon, green city that integrates smart technologies for urban living. GreenTech Cyberjaya 2 is an extension of the original Cyberjaya smart city concept, focusing on energy-efficient infrastructure and sustainable urban solutions.
Green Aspects: Smart building technologies, solar power integration, green mobility solutions (such as electric buses and bike-sharing), and sustainable waste management.



11 SUNWAY CITY



Project: Smart and Sustainable Township
Overview: Sunway City is Malaysia's first fully integrated green township certified under the Low Carbon Cities Framework. It features energy-efficient buildings, smart water management, and extensive green spaces.
Green Aspects: A combination of sustainable construction, green spaces, and integrated smart solutions like solar panels, rainwater harvesting systems, and electric vehicle charging stations.

10 FOREST CITY



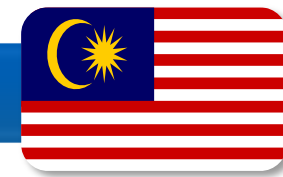
Overview: Forest City is a massive development near Johor Bahru, positioned as an eco-friendly smart city integrating technology and nature. It includes smart homes, vertical greening, and energy-efficient infrastructure.
Green Aspects: Features sustainable technologies like vertical gardens, green rooftops, energy-efficient buildings, solar panels, and smart water management systems. The development is designed to minimize environmental impact and promote biodiversity.

9 ECO MAJESTIC BY ECOWORLD



Overview: Eco Majestic is a sustainable township in Semenyih that blends smart city concepts with nature, offering green spaces, sustainable homes, and community-driven development.
Green Aspects: Incorporation of eco-friendly home designs, energy-efficient infrastructure, and vast green landscapes, including parks and lakes.

SMART CITY PROJECTS IN MALAYSIA



SMART GOVERNMENT: INTEGRATED OPERATION CENTRE/COMMAND CENTRE

CITY OF PETALING JAYA



CITY OF KUALA LUMPUR



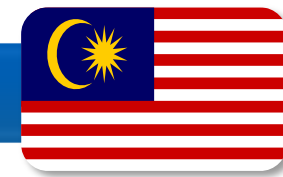
SMART CITY PROJECTS IN MALAYSIA



SMART MOBILITY: ELECTRIC VEHICLE (EV) & EV CHARGING INFRASTRUCTURE



SMART CITY PROJECTS IN MALAYSIA

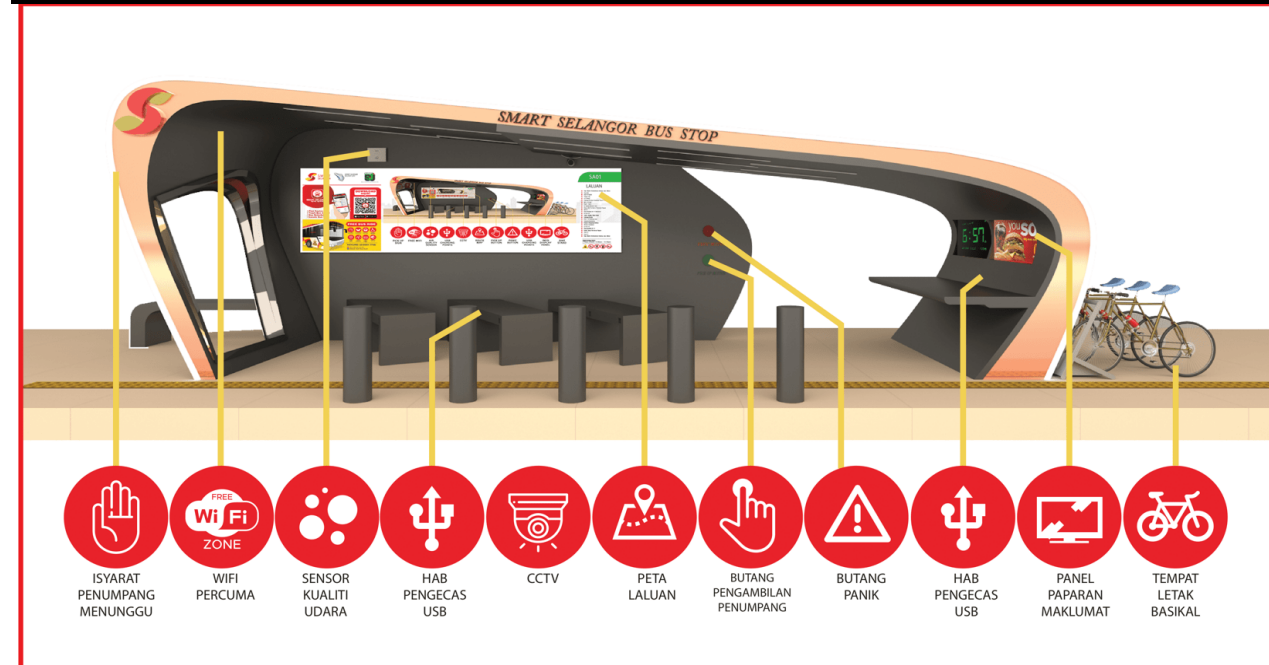


SMART MOBILITY: SMART BUS STOP



CITY OF PENANG

SMART MOBILITY: SMART BUS STOP & ELECTRIC BUS



CITY OF SHAH ALAM (SELANGOR)

Wayforward :Malaysia Smart City Maturity Journey

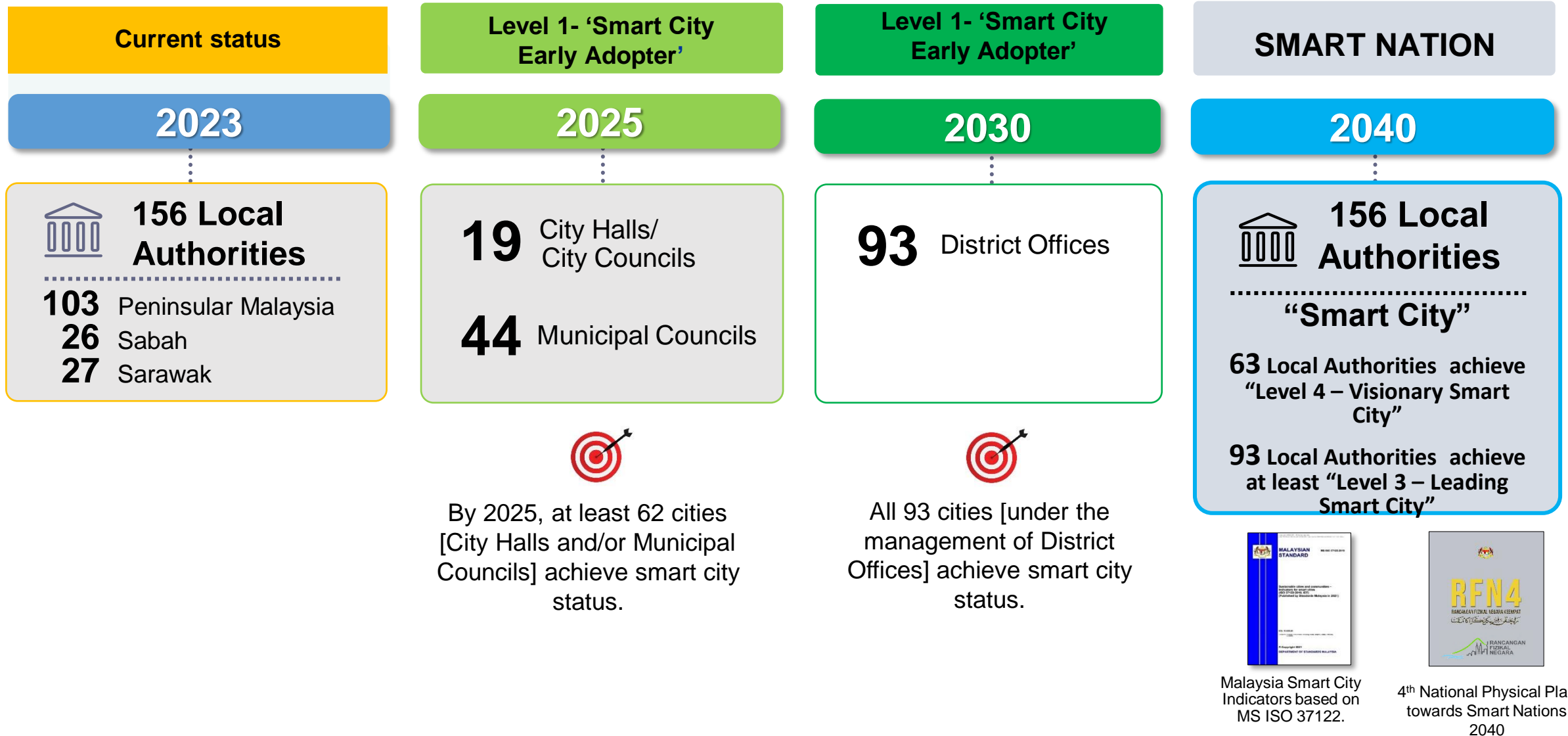
		Level 1 – Smart City Early Adopter	Level 2 – Developing Smart City	Level 3 – Leading Smart City	Level 4 – Visionary Smart City	
		62 PBT City Hall, City Council & Municipal Council (2025 – 2040) 15 Years Preparation Duration				
		93 PBT District Council (2030 – 2040) 10 Years Preparation Duration				
POLICY	Smart City Action Plan	▪ Nil	▪ Prepare Smart City Action Plan	▪ Implement some initiatives in the Smart City Action Plan	▪ Implement most part of Smart City Action Plan	▪ Fully implement the Smart City Action Plan ▪ Reviewing the Smart City Action Plan
	Smart City Governance	▪ Nil	▪ Establish Smart City Unit/ Committee	▪ Active Smart City Committee ▪ Established Smart City Unit/ Division	▪ Proactive Smart City Committee ▪ Smart City Unit / Division	▪ Proactive and effective Smart City Committee ▪ Smart City Unit / Division ▪ Smart City Expert
DATA MANAGEMENT	Data Management	▪ No Open Data Policy ▪ Siloed Data ▪ Manual Data Access	▪ Formulate open data policy ▪ Limited data integration and sharing	▪ Implement open data policy ▪ Comprehensive data integration (intra-agency) ▪ Advanced dashboard & reporting	▪ Implement comprehensive open data policy ▪ Comprehensive data integration (inter-agency)	▪ Implement comprehensive open data policy ▪ Automated data integration
	Data Analytics	▪ Nil	▪ Descriptive	▪ Descriptive ▪ Diagnostic	▪ Descriptive ▪ Diagnostic ▪ Predictive	▪ Descriptive ▪ Diagnostic ▪ Predictive ▪ Prescriptive
	Command Centre / IOC	▪ Nil command centre/ dashboard	▪ Initial dashboard/ mini command centre	▪ Integrated command centre	▪ Advanced command centre	▪ Intelligent Operation Centre
PROJECT & PROGRAM	Internet of Things (IoT)	▪ Nil/ Limited	▪ Integrated IoT and connectivity	▪ Integration between IoT vertical	▪ Extensive Integration between IoT vertical	▪ Next Generation IoT (NGIoT)
	MS ISO 37122:2019	▪ Not complied	▪ Comply 10 indicators	▪ Comply 35 indicators	▪ Comply 63 indicators	▪ Comply 85 indicators
		1 – 3 Years	3 – 5 Years	5 – 10 Years	10 – 15 Years	
		2023 - 2025	2026 - 2030	2031 – 2035 >	2035 – 2040 >	

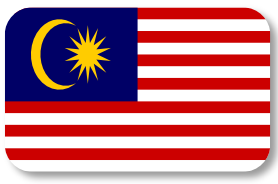
SMART CITY IN MALAYSIA: OUR JOURNEY AND WAY FORWARD DIRECTION



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MALAYSIA'S STRATEGY TOWARDS SMART NATION 2040





CONCLUSION



Ministry of Housing & Local
Government



“While **Smart Cities** leverage technology and data to enhance urban living, improve services, and promote economic growth, on the other hand, **Green Cities or transformation** focus on sustainable development, reducing carbon footprints, and promoting ecological balance.”

THANK YOU



SMART CITY FRAMEWORK (SOFTCOPY)



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