KUALA LUMPUR
SMART CITY MASTER PLAN
2021 – 2025

EXECUTIVE BRIEF

DEWAN BANDARAYA KUALA LUMPUR
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www.dbkl.gov.my
“Kuala Lumpur is beginning to and will continue to integrate technological solutions into local operations, from transportation to communications and other areas. The mechanisms of these systems are not always observable to the communities. Still, as technologies' integration becomes more visible in our lives, we could begin to see significant and tangible changes in Kuala Lumpur.”

Datuk Nor Hisham Ahmad Dahlan, Mayor of Kuala Lumpur 2018-2020
The rapid urbanisation that has taken place in the last decades has resulted in various urban issues such as congestion and pollution. With the integration of technologies, we now have an opportunity to re-engage how cities are planned, designed, financed, developed, and governed.
THE CHALLENGES OF URBANISATION

Rapid urbanisation has had consequences for the distribution of population and enormous demands on land, water, housing, transport, and employment. Such geographical concentrations of people, growing rapidly, have presented challenges of both numbers and quality in ensuring an adequate housing supply, solving urban congestion, and protecting the environment at the local and national policy levels.

NATIONAL CONTEXT

The National Smart City Framework will be the point of reference for DBKL to take progressive steps to upgrade connectivity, infrastructure, and communication effectiveness with the people, businesses and communities, thus improving the quality of life of Kuala Lumpur’s dwellers.

KUALA LUMPUR CONTEXT

Kuala Lumpur Smart City Master Plan 2021 – 2025 is a giant leap forward towards transforming KL into a renowned and an exemplary urban centre of the future. KLSCMP2025 shares the Smart City aspirations with Pelan Strategik DBKL 2021 – 2030 and Pelan Struktur Kuala Lumpur 2040 (PSKL 2040) to address the capital's rapid urbanisation challenges.
KUALA LUMPUR DEFINITION OF SMART CITY

In Kuala Lumpur, Smart City is defined as the concerted urban management approach that places people at the centre of its initiatives and will apply various technologies to enhance and improve its citizens’ lives.

The variety of views about what a Smart City is has resulted in broad definitions with no focus on specific technologies or sectors. Kuala Lumpur’s approach to Smart City is people focused. Kuala Lumpur commits to using information and communication technology to enhance its liveability, workability and sustainability.

SIGNIFICANCE OF SMART CITY

1. To Address Urban Challenges Arising from Rapid Urbanisation
2. To Meet National and Global Agenda
3. To Adopt New Global Development Trends
4. To Promote Digital Economy
5. To Position Kuala Lumpur to be on Par with other Cities Globally
WHERE WE ARE NOW

Kuala Lumpur Smart City Master Plan 2021 - 2025 is a cornerstone for advancing Kuala Lumpur's global reputation as one of the most thriving, liveable, and sustainable cities. It provides a platform to enhance the city's unique places and environment, foster its innovation ecosystem, celebrate its rich cultural diversity, and strengthen sense of community and belongingness.

These are the top global Smart City indexes that Kuala Lumpur are being benchmarked against.

These city rankings embody the growing global demand for urban metrics, city performance measurement, and internationally oriented comparisons.
LEARNING FROM TOP WORLD SMART CITIES

Kuala Lumpur strives to learn from the top smart cities of the world. In the course of developing this Master Plan, we have evaluated selected Smart Cities for comparison and benchmarking. The criteria for selecting these cities is based on their focus of implementing smart solutions that improve the wellbeing of its people and communities.
This Master Plan is manifested on the works done by applying the three-phased Gap Analysis approach with a significant focus on co-creation to align with the definition of Kuala Lumpur Smart City, which is people centric.

**CURRENT STATE ANALYSIS**
Determine Smart City concepts including objectives, vision and mission, definition, benchmarking, criteria and components.

**FUTURE STATE SCENARIOS**
Perform gap analysis, design and develop policies and strategies, map issues against strategies, indicators and initiatives, and propose new initiatives.

**STRATEGIC RECOMMENDATIONS**
Refine initiatives, provide implementation and monitoring mechanisms to ensure that the Master Plan is properly executed by the implementing agencies and stakeholders.
There are three components of the Gap Analysis which will become the basis of the Master Plan development.

The Smart City Master Plan is structured around four outcomes. While each outcome focuses on a specific domain, the success of the city’s smart transformation is dependent on a holistic approach, whereby the four outcomes seamlessly integrate and support each other.
VISION

KUALA LUMPUR, A CITY FOR ALL

A Smart City that places people at the center of its initiatives, harnessing technology and data to enhance and improve its citizens’ lives.

MISSION

To Endeavour becoming a Smart City that is Safe and Secure, Clean and Green, Efficient and Sustainable.

TAGLINE

Smart Kuala Lumpur by Smart Citizens
The Smart City Strategic Framework is structured around seven outcomes. While each result focuses on a specific component, the success of the city’s smart transformation is dependent on a holistic approach, whereby the seven outcomes seamlessly integrate and support each other.
A set of five principles has been collaboratively developed to underpin Kuala Lumpur Smart City implementation. These principles will help us to navigate the rapidly evolving urban landscape, address complex challenges and ensure the design, development and deployment of our smart future is grounded in our true intent.

GUIDING PRINCIPLES

**PEOPLE FIRST**
We ensure that our people are at the heart of everything we do, putting technology and data to work to support and empower our communities in their everyday life.

**INNOVATIVE**
We encourage disruption and promote the development of bold ideas and solutions to address cities challenges and unlock new opportunities.

**INCLUSIVE**
No one is left behind. We celebrate our rich diversity and ensure everyone can participate and belong.

**PURPOSE DRIVEN**
Our approach is firmly grounded in the challenges facing Kuala Lumpur. We will go beyond optimization to provide purpose driven services which will ultimately enhance the quality of life for citizens.

**AGILE**
We strive to move quickly and easily. We want to enable our people and citizens to learn by experience. We must thrive to be adaptive and flexible to address new challenges created by rapidly changing urban landscape and community needs.
The Kuala Lumpur Smart City Master Plan 2021 – 2025 has also referred to these publications to enhance its comprehensiveness and inclusivity in its planning of Smart City.
KEY URBAN CHALLENGES

Smart City initiatives are widely used to address urban challenges resulting from rapid urbanisation. Here are the urban challenges for Kuala Lumpur.

Economy
- Readiness to transition into high value-added industries
- Development of innovative businesses and enterprises
- Implementation of e-wallet in businesses
- Productivity in economy
- Creation of high value-added jobs
- Space for hawkers
- Illegal businesses

Living
- Price of Smart Homes
- Affordable homes
- Prevention of crime
- Monitoring systems
- Illegal immigrants
- Quality of life and public facilities
- Demand for healthcare services

Environment
- Management of solid waste
- Air pollution
- Water pollution
- Carbon footprint
- Illegal structures by factories and businesses
- Traffic congestion
- Landslide
- Flood
- Availability of green areas
- Disaster warning systems
- Consumption of non-renewable energy
- Management of non-revenue water
- Awareness of recycling

People
- Skilled manpower and talent pool
- Adaptability to emerging technologies
- e-Commerce knowledge
- Harmonious integration and community empowerment
- Gender friendly environment and inclusivity of vulnerable groups
- Moral intelligence and social integrity

Government
- Information and data sharing in and between government agencies
- Public information sharing from government
- Coordination between departments and agencies
- Participation from public and other external stakeholders
- Quality of e-government services
- Data integrity

Mobility
- Traffic congestion
- Volume of traffic into city
- Rail ridership and private vehicle ownership
- Accessibility/interconnection between public transport
- First and last mile connectivity and accessibility
- Public transport coverage
- Service quality and facility provision in public transportation
- Enforcement for traffic violation

Digital Infrastructure
- Indoor and outdoor network coverage
- Fibre optic readiness
- Internet speed and connectivity
- Functionality of ITIS
- Integration between various systems
- Cybersecurity
The analyses performed on the current state (including on current initiatives that have been confirmed, developed or deployed by DBKL) against future state scenarios during the development of the Kuala Lumpur Smart City Master Plan 2021 – 2025 produced insights for DBKL to embark on new strategies and initiatives to minimize or close the gaps to achieve its Smart City vision.
Kuala Lumpur has confirmed, developed or deployed over 350 initiatives prior to or during the development of this Master Plan. The initiatives below are proposed to further enhance Kuala Lumpur’s vision to become a City for All. KLSCMP2025 has listed 28 proposed initiatives.

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<thead>
<tr>
<th>Smart Economy</th>
<th>Smart Living</th>
<th>Smart Environment</th>
<th>Smart People</th>
<th>Smart Government</th>
<th>Smart Mobility</th>
<th>Smart Digital Infrastructure</th>
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<tr>
<td>2. Tourism</td>
<td>Ready for</td>
<td>Management</td>
<td>Community</td>
<td>(Co-Creation</td>
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<td>Analytics Programme</td>
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<td>Destination:</td>
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<td>Experience</td>
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<td>Through</td>
<td>3. Enhanced</td>
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<td>Bodycam for</td>
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<td>4. e-Channel</td>
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<td>9. Smart Landscape</td>
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## STRATEGIES & INITIATIVES

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<th>TERM</th>
<th>DEVELOPMENT</th>
<th>INITIATION</th>
<th>DEPLOYMENT</th>
<th>INITIATIVES</th>
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| Phase 1 Short-Term Initiatives | 3 - 6 Month | Q1 2021    | Q3 2021    | 1. Kolabora-C  
2. Digital Community  
3. E-Library  
4. My Opinion  
5. KLCARES / iSPAAA |
| Phase 2 Medium-Term Initiatives | 6 - 12 Month | Q4 2021    | Q1 2023    | 1. Tourism Destination  
2. Tourism Product Online Store  
3. e-Channel  
4. Smart Home Ready for people  
5. Smart Waste Management  
6. Smart Pollution Control  
7. Smart Disaster Prediction & Resilience  
8. Climate Action Plan  
9. Smart Renewable Energy  
10. Smart Energy Street  
11. Smart Green Building  
12. Duta e-Commerce  
13. City-Wide Collaboration  
14. KLUO  
15. Smart City Division  
16. Smart Traffic Management  
17. City Data Analytics |
| Phase 3 Long – Term Initiatives | 12 - 18 Month | Q2 2023    | Q4 2024    | 1. Safe City  
2. Enhanced Bodycam  
3. Collaboration With Telcos  
4. Cashless Society  
5. Enhanced Tree Inventory Management  
6. Smart Landscape Management |
IMPLEMENTATION ROADMAP

Revision 1 KL Smart City Plan

Performance Review Medium Term Projects

Long Term: 12 – 18 months

Medium Term Projects Deployment

Q1 2023

Q2 2022

Q3 2025

Q4 2024

Q3 2024

Q2 2023

Performance Review: Quick Wins

Long Term Projects Deployment

Medium Term: 6 – 12 months

Quick Wins 3 – 6 months

Launch of KLSCMP

Q1 2021

Q4 2021

Sep 2020

There is a need to have a coordinated approach for the Kuala Lumpur Smart City Master Plan’s internal and external communication. To ensure that the Kuala Lumpur Smart City Master Plan is delivered successfully, a new DBKL Smart City Unit is proposed. DBKL Smart City Unit will be responsible for ensuring Kuala Lumpur Smart City Master Plan is delivered and implemented through active communication, monitoring, advisory, and reporting.

**Activities:**

1. Coordination of communication activities  
2. Media/press releases  
3. KL Smart City website  
4. Project profile on social networks  
5. A blog dedicated to the project  
6. Smart City project dashboard