



Monetising Urban Assets with Smart Solutions

by Azrin Aris

State Regulatory & Engagement, TM Selangor

- Malaysia's massive urban population growth calls for more efficient, technology-driven utilisation of resources, which could present new growth opportunities

Malaysia's rapid urbanisation is taking a toll on its public infrastructures. In the last decade, the country's urban population increased from 70% to 78%. By the end of 2030, urbanisation is expected to reach 83%. This massive growth among urban populations raises the need for more efficient utilisation of resources. Smart cities are a necessary solution to this challenge, as they enhance citizen experience and improve living standards.

For Malaysians, [traffic congestion](#) and long queues for parking spots are an everyday challenge, among numerous other concerns arising within dense, urban living. Recognising the role of technology and smart mobility solutions in addressing these challenges, we are beginning to see government initiatives such as the launch in 2021 of the *Smart City Handbook: Malaysia* by the Housing and Local Government ministry (KPTK) together with the UK High Commissioner. This was closely followed by technological partnership think tank MIGHT's (Malaysia Industry-Government Group for High Technology) *Smart City Outlook 2021/22 (MSCO) report*.

Other key smart city developments include the [Smart Selangor](#) initiative, which aims to make it the most liveable state within the region by 2025, [Smart City Iskandar Malaysia](#) in the Southern region, and various digital programmes led by DBKL (Kuala Lumpur City Hall) under its [Kuala Lumpur Smart City Blueprint 2021-2025](#).

With a national 5G rollout steadily emerging, we can also expect further acceleration of smart solutions among Malaysia's cities. A **clear strategy for the capitalisation** of a particular smart city project is necessary, which includes ROI and potential cashflows that can help accelerate adoption.

Below are four revenue-generating opportunities that smart cities could present for stakeholders which could also create more funding resources and investments in projects that have heavier CAPEX requirements.

1. SMART PARKING

Private vehicle ownership is growing at a rapid pace, leading to mobility as one of the biggest issues especially in Tier 1 cities. Over the last few years several apps have been introduced to help Malaysian leverage online payments for parking. However, that addresses just one part of the problem.

One of the biggest challenges, and also opportunity to capitalise on is in addressing the time needed in finding available parking spaces. In Kuala Lumpur, a person spends an average of 25 minutes to find a parking space, which adds up to an astonishing 152 hours per year.¹This places us second only to Vietnam, in terms of parking inefficiency.

Table 1: Average time spent searching for a parking space within ASEAN cities daily:

City	Average daily minutes
Hanoi	45
Ho Chi Minh	31
Kuala Lumpur	25

Manila	24
Bangkok	24
Jakarta	21
Singapore	19

Source: *The ASEAN post, BCG (2017)*

The use of smart parking solutions has been proven to effectively help citizens find slots more efficiently, alleviates congestion, while also adding to revenue generation. As seen below, cities such as Treviso have made incredible revenue gains by effectively enhancing parking facilities through the installation of smart parking systems.

Smart City	Details of Smart Parking Project	Estimated Annual Revenue (USD Million)
Bangalore	3333 car parking spaces, 10000 for two-wheelers	RM 175.79 million
Chennai	4000 spaces	RM 11.7 million
Treviso (Italy)	2500 detection sensors, 50 parking meters, integrated user app for navigation and payment, management and control software, app for parking controller	60% increase in payment receipts over six years of smart parking deployment (From RM 12.97 million in 2010 to RM 20.89 in 2016)

The implementation of smart parking solutions would also enhance enforcement measures, which is a key benefit that is not often talked about by smart city solution providers. The enhancement of parking management systems through smart payment methods, vehicle detection sensors and centralised dashboards for more effective monitoring could streamline and potentially increase revenue generation by encouraging more effective collections of payments and fines, while delivering a safer and more efficient experience to its' users.

2. DIGITAL ADVERTISEMENTS

In a landscape saturated with advertisements, the only way to cut through the noise and connect with the right audiences is to make the messages relevant, engaging and targeted, as well as personalised. Local councils and the marketing community in smart cities have the opportunity to enhance the level of relevancy and attractiveness of advertisements. Business models that cater to smart citizens with useful, timely and targeted information will have increased traction compared to the one-ad-for-all approach.

Digital-out-of-home (DOOH) advertisements has transformed the conventional method of displaying information on screens to analytics-based personalised messages for various target audiences. DOOH advertisements offer several benefits for different sectors of the economy. For instance, the government can lease public spaces it controls and maintains, such as bus shelters, public hospitals and information kiosks, to DOOH owners.

A great example of innovative DOOH initiatives that can be emulated by city councils around the world is [LinkNYC](#), which is a project kickstarted by the New York City Department of Information Technology and Telecommunications (DOITT). The project started with a deployment of 7,500 structures called 'links' which are structures that provide New Yorkers with free Wi-Fi access, phone calls, charging ports and tablets to access city services. Empty space on the structures is converted to screens used to display digital ads. Upon inception, the advertising initiative was estimated to generate over \$1 billion in revenue over twelve years, with the City of New York slated to receive over \$500 million from the project.

3. SMART METERS

The installation of smart energy meters is another opportunity to monetise city assets, while delivering a better human experience. The approach potentially reduces theft and maximises revenue, while providing data to providers and customers.

Smart meters form a crucial part of the anti-energy theft mechanism. In 2021, one of the state-owned power providers reported losses of RM81 million. Crypto miners further aggravated the electricity theft problem by allegedly tampering with electricity meters to avoid hefty electricity bills. These cases have seen a fivefold increase in the country since 2018 and puts constraints on the overall electricity supply and public safety.

Smart meters built with relevant underlying technologies can combat meter rigging. AI and machine learning, for example, can help identify anomalies in electricity consumption patterns.

4. DATA MONETISATION

Evolving consumer dynamics have resulted in the demand for personalised products. Open data portals offer raw information to the private sector and can be leveraged for cities with lower CAPEX budgets. Data analytics in smart cities is useful for crime prevention, asset management, and city benchmarking and can spur innovation among private organisations.

Governments, however, must ensure that personal data is not misused. Rather the sharing of such data should be seen as an opportunity for the welfare of smart citizens.

It is essential to note that implementing a particular smart city solution in one state might not have the same measure of success in another. Revenue maximisation or cost reduction from deploying smart services is only possible for the state authorities or local councils if the solutions are experience and outcome driven. Revenue generation is highly dependent on social acceptance, which is dependent on the potential of smart city solutions to match the needs of the citizens.

Looking ahead, further economic opportunities will emerge as Malaysia embraces a Smart City Framework as part of its 4IR policies. Under this framework within the 12th Malaysia Plan 2021-2025, of which [MyDigital](#) is a component, the digital transformation of society and the economy is a critical aspect to spur Malaysia's growth and to uplift the quality and safety of life for the *Rakyat*.

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