

Innovative Viewpoints:
“It’s Up to Us”

Cycling your way to a
healthier lifestyle

Making the golden years
the best years



How Cities Move

Cities and Mobility

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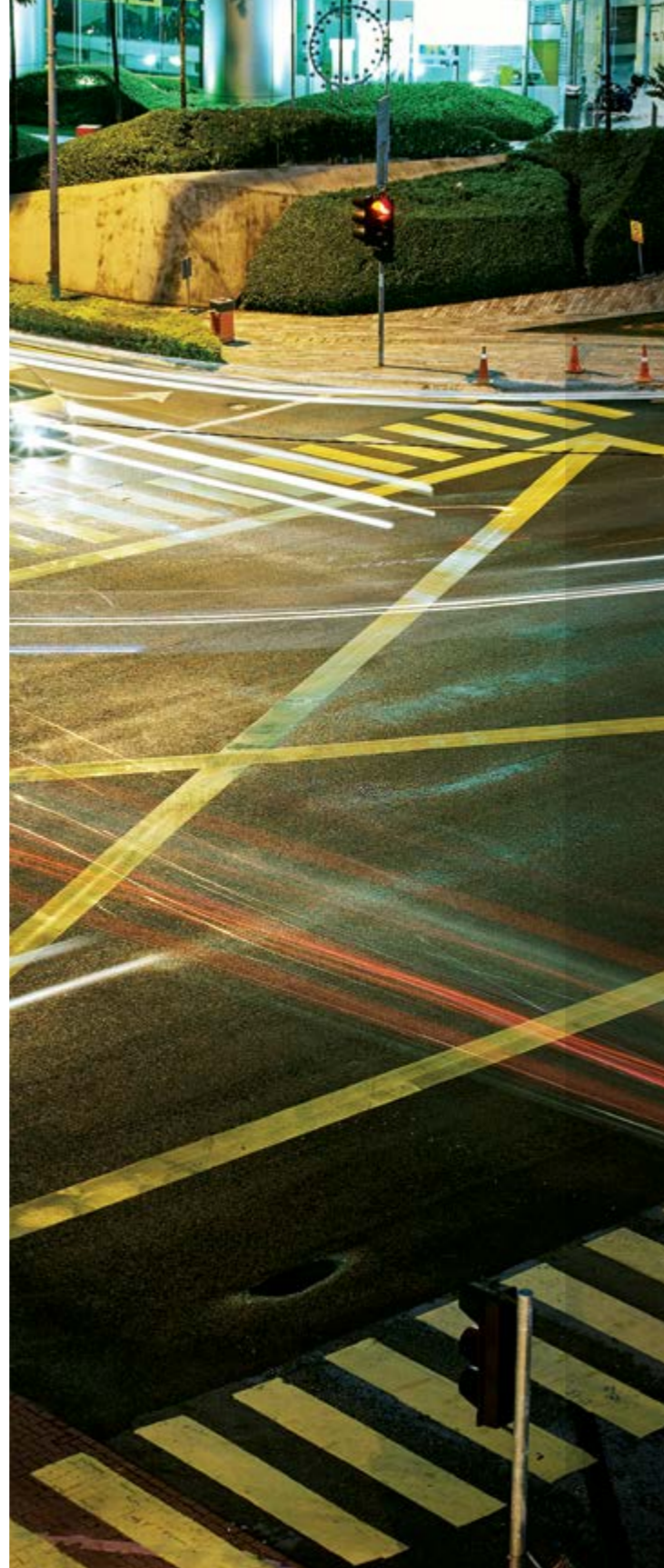
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MAKING THE GOLDEN YEARS THE BEST YEARS



KLCSI is a joint venture between AECOM and Yayasan Wilayah Persekutuan

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FOREWORD

Welcome to the second edition of 'Suara Inovasi', or the voice of innovation. In this issue, we continue to chart our progress towards improving the livability of Kuala Lumpur through the living lab approach. The Centre is a joint venture between AECOM and Yayasan Wilayah Persekutuan, a private company and a government agency respectively, who both share a common goal of making sustainability happen using innovative and creative means.

Our lead article is on urban mobility and the challenges of getting it right for cities. Many of our urban centres are experiencing gridlocks, resulting in congestion, air pollution, public health and safety issues, losses in productive employment and emissions of greenhouse gases.

How do 'enlightened' cities address these problems? We discuss how a return to basics like walking and cycling can partly answer this question. We also have a special feature on mass transit and how Hong Kong and Singapore have established their own ways of making public transport viable and affordable, and how KL's quest to establish a mass transit system can be realized.

We present the insights and views of two distinguished figures in Malaysia's policy and business scene on how the country's stakeholders need to shift in order to achieve sustainability, and what companies and organizations must understand about sustainable development and its impact on businesses in the long run.

Lastly, we discuss the issue of an ageing population and what this means for urban centres like Kuala Lumpur. We need to prepare ourselves for this new wave which is coming in the not-so-distant future.

I hope that you will enjoy reading this account of our journey so far. Do feel free to contact me at sk.tang@klcsi.com if you want further information or if you have ideas on how we can do things more sustainably.



Dr Thomas S.K. Tang
Managing Director, KLCSI

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HOW CITIES MOVE

Cities and Mobility

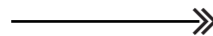
The growth of cities has raised the question of urban mobility. More buildings and infrastructure ensure that there are facilities available for cities to function. But what are we doing to get people from their homes to workplaces, and vice versa? How are we able to connect communities to maintain the social integrity of urban dwellings? At the same time, what does this mean for choice of transport modes?

With the predominance of motorized vehicles or automobiles, the course that many cities are taking is leading to traffic congestion, deteriorating air quality and loss of productive time due to hours spent in traffic jams. These are constant challenges that many cities face.

In 1964, the World's Fair in New York showed a glimpse of the future through General Motor's version of 'Futurama', a showcase where automobiles glided seamlessly along gleaming interchanges alongside pedestrians strolling on elevated walkways. But the reality, 50 years or so on, is far from this vision.

The private ownership of vehicles has reached unprecedented levels. The affordability of private automobiles along with cheap oil prices have placed this transport option within the general public's means. In 2012, it was estimated that there were about 1.1 billion automobiles around the world, which was a 57% increase from the 700 million just 8 years earlier. According to the World Bank, the US still leads the way with 809 automobiles per 1,000 people. If we take individual cities, 36 cities in China account for more than 30% of the country's 93 million private passenger vehicles with Metro Beijing alone having more than four million private passenger vehicles - 45% more than New York City, with its 1.8 million automobiles.

The challenge for cities lies in making appropriate use of land for transportation and prioritising the right type of transportation for citizens. Streets are an integral part of cities and street networks are necessary to allow safe, comfortable and convenient movement of people. Streets are also required for moving goods, providing access to properties and covering utility pipelines. They form part of neighbourhoods, connecting spaces for recreation and socialising. For dense land uses, mobility is important and streets therefore have to be designed to allow mass transit.





Automobiles vs Pedestrians

The growth in automobile ownership in cities means that there will be more land set aside for roads and less for walking. Walking promotes health and interaction with the city. But it is losing the battle in many urban cities, becoming an activity confined to narrow sidewalks or inaccessible walkways. Progressive cities have recognised this dilemma and have designed streets with minimal barriers for pedestrians so that automobiles can co-exist with them.

Well-planned streets should include:

- Zoning so that neighbourhood centres are connected within a few km of each other;
- Guidelines for buildings so that they are set back with the right distance from streets;
- Parking prohibition between the building's front door and the street;
- Attractiveness to make buildings a pleasure to walk past;

- Consistent lighting of the pedestrian realm;
- Planting standards to make the streets leafy with healthy trees;
- Time synchronized traffic lights to reduce traffic congestion; and
- A high level of maintenance including regular sweeping and graffiti removal.

Shared spaces

Many cities have limited space for street widening. Improvements such as wider sidewalks for pedestrians may come at the expense of other uses such as lanes for vehicles. The principle of shared spaces is that pedestrians share vehicle space at grade level so that they form linear plazas with occasional traffic. Pedestrians have right of way and if the shared space is more than 5 meters wide, special pedestrian-only zones are established.

Shared spaces tend to have:

- Alternative paving materials distinguishing them from traditional streets;
- Contrasts in tactile and colour features between pedestrian only and shared zones;
- Pedestrian-only spaces interspersed among passenger alighting spaces, driveways or parking spaces;
- Landscaping, seating and other streetscape furniture and amenities; and
- Vehicle closures on an intermittent or temporary basis for events, restaurant seating and markets.

In general, a city should strike a balance between automobile and pedestrian needs. Making walking a pleasure should be an imperative for sustainable cities. This means that cities should be designed to cater for all walks of life. These factors include:

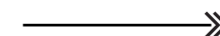
- Beautiful spaces even if the buildings are mediocre;
- Focusing on the bottom 10 meters of the building to ensure a functional and aesthetic relationship with the sidewalk;
- Putting up sun and wind shelters;
- Planting trees;
- Social interaction between dwellers and pedestrians; and
- Maintaining things to make it look like someone cares.

Some of the world's most walkable cities based on these features include Florence, Paris, Dubrovnik, New York and Vancouver. Street design with pedestrians in mind includes street typologies that account for different pedestrian needs in different

land use contexts, minimum dimensional requirements for sidewalks (including edges, furnishings, throughway and frontage zones), minimizing pedestrian crossing distances, setting standards for distances between pedestrian crossings and standards for how driveways cross sidewalks, with the sidewalk taking priority.

In addition, basic services such as schools, grocery stores and community centers should be within walking distance. Retailers will require a certain number of people within their catchment area so that they can operate in clusters within walkable distances. The best urban places offer not only the basic needs of life within walking reach but also places of recreation.

Cities should have a main retail street in every neighbourhood, where retailers are concentrated in a walkable area, with parking arrangements available and the right mix of retail shops.



Public transit – a Panacea or a White Elephant?

In dense cities, public transit is viewed as the solution for urban mobility. There are many supporting arguments for this:

- In urban areas it is more cost effective to invest in public transit to create roadway capacity from the existing infrastructure than to invest in adding more roadway capacity;
- Switching to public transit reduces greenhouse gas emissions and air pollution;
- Transit is an equitable means of transport;
- Improved health, as there is some level of walking involved in getting to and from stations and the ultimate destinations. Buses offer flexibility and cost advantages over rail. They can provide a high level of trunk or major corridor service in emerging transit markets and essential feeder services in more mature markets. However, in general the challenge for buses lies in obtaining right of way and siting of bus stop locations. When these factors are not managed properly, buses become a secondary option to private vehicles, particularly in suburban areas. Buses also suffer from an unfair reputation of poor cleanliness and sub-par maintenance.

Bus Rapid Transit

According to the Transit Cooperative Research Program, the Bus Rapid Transit or BRT is a “flexible, rubber tired rapid transit mode that combines stations, services, running ways and Intelligent Transport Systems elements into an integrated system with a strong positive identity.”

BRT has the advantage of being a lot less costlier than rail and has been implemented successfully in South America, Australia, Europe and North America. BRT relies on right of way and the ability to jump queues through bus only lanes and transit signal priority, and offers frequent services such that bus schedules are not necessary. BRT can be a first stage of development towards rail or an end in itself.

Often BRT lines are implemented in phases either incrementally or over a whole corridor in itself.

Rail mass transit has an advantage over buses in terms of capacity which can reduce costs in high demand corridors. As well as offering a smoother ride, rail tends to be quieter and cleaner than bus transit. The downside is the high capital costs although the rail property model which allows railway operators to become property landlords helps alleviate this problem.

Light rail transit or LRT is the most common rail solution in urban areas as it is cheaper than metro rail, has simpler stops and can be constructed at street level. LRT is a flexible

hybrid that can operate within cities or connect outlying suburbs to central business areas. Metro railways on the other hand are the top of the line in urban transit offering fast, clean and efficient urban transport with construction costs often running in millions of dollars per km of line. Metro rail provides a web of coverage in dense areas and lines often extend into the suburbs. Stations can be multimodal hubs, served by feeder buses and other rail lines.

It often helps to have mass rail transit stations designed to encourage ridership by incorporating a range of services suitable to the type of travel and the use of surrounding land area. For commuter stations that have their heaviest ridership during rush hour, conveniences such as coffee shops, dry-cleaners, newsstands, banks and post offices are commonly provided. For stops near colleges and universities, amenities like cinemas, museums, restaurants, bars and grocery stores are probably best to suit student expectations. Locating municipal services in less well-off areas furthermore helps users who may be economically challenged and are not able to afford cars. Mass rail transit systems are touted to be the most sustainable form of mass urban transport. This runs true in compact dense cities like New York, Tokyo, London, Hong Kong and Singapore. But sadly there are other examples where some rail systems have become white elephants due to low ridership caused by high ticket prices, bad access to transit stops and more importantly the affordability of automobiles which offer greater door to door convenience over public transit. For mass rail transit to work, stations must be accessible and conveniently located. If location is a problem then good affordable feeder systems must support the stations. Secondly, private vehicles should be discouraged through road tolls, parking charges and vehicle taxes, making public transit the more economically attractive proposition.





Cycling your way to a healthier lifestyle

Interest in urban cycling has grown in the past decade due to the recognition that cycling is probably the most sustainable form of transport, offering efficiency, low pollution, convenience, lower cost and better health. Factors that encourage cycling are:

- **Numbers** – the more cyclists that take to the roads, the more attention that will be paid by motorists to good driving behaviour in order to avoid hitting cyclists;
- **Safety** – well-designed dedicated and shared lanes will provide protection for cyclists and ensure better road safety when riding;
- **Distances** – cycling is best when the distances are of a length sufficiently long to travel with optimum effort yet not so short that one could walk the distance. Typically commuting distances of 3-4 km are preferred;

- **Socialising** – cycling can be a social exercise whether for recreation (with cycling clubs), as a family activity or when commuting. Cycle lanes that can accommodate two cyclists in both directions can encourage social interaction between riders;
- **Portability** – bicycles can be used for transporting goods using baskets and trailers. Bicycles themselves can be transportable through folding mechanisms;
- **Comfort** – part of the value proposition of cycling are the physical activity and the enjoyment of fresh air. This can have varying effects in different climates but on the whole, they form part of the attractiveness of cycling. It is useful to have shower facilities at the workplace for washing and freshening up which also add to the sense of well-being after the journey.

Bicycle facilities

There are four types of facilities: off-street paths; cycle tracks; bike lanes; and narrow lanes.

- Off-street paths are not part of the formal road network and tend to be of shared use with pedestrians. They can take a variety of sizes but usually require 3-meter widths to allow cyclists to pass one another.
- When a bike lane is separated from other lanes in the street, it becomes a cycle track. Cycle tracks are usually one way and wide enough for two people to cycle together or to pass one another. Care must be taken to maintain visibility for cyclists and motorists at intersections and driveways. Cycle tracks must also be distinctive so that pedestrians do not inadvertently wander onto them.
- Bike lanes are travel lanes for bicycles and other non-motorised forms of transport. They are generally 2-3 meters wide and



placed between parking and travel lanes. Some bike lanes are only used during in rush hours and parking is allowed on that space at other times.

- If a street is too narrow to install a bike lane, one solution is to narrow it further to ensure that a vehicle cannot pass a cyclist except by going slowly. Narrow lanes are no more than 3 meters wide and are usually subjected to traffic calming.

Other features that encourage cycling include bike parking spaces which are secure, sheltered and well-lit; this is more attractive than having to chain your bikes to fences and railings which make them unsightly while creating a nuisance. Bicycle racks are the most abundant and least expensive to install. The better ones offer support to the bicycle, are well anchored and allow the bike frame and wheels to be securely locked to the rack. Lastly, locker and shower facilities at work will further encourage the use of bicycles to commute to work.

For the longer distance commutes, the 'last mile' approach where commuters can cycle to public mass transit stations where they either leave their bicycles there so that they can catch the train to work or take the bicycles into the train, if allowed.

The future of urban mobility

Cities face many challenges moving forward to be more livable and sustainable. Mobility of citizens whether for work, pleasure or socializing will need to be well managed to avoid cities becoming dominated by automobiles and running the risk of cutting off and marginalizing communities. Other transport problems include congestion, high carbon emissions, deteriorating air quality and road safety.


Cities of the future may well become 'smart' with better systems to manage traffic flow, car sharing, parking charges and road usage pricing. Time, cost and quality of travel will determine which method proves to be most impactful. Transit on demand could well become popular in the future whereby people 'order' their transportation when needed minimizing the need to own an automobile. When 'driverless' cars become more than just a demo-type pilot, it is possible that this form of transport will become prevalent.

The notion of active mobility is still the most attractive form of mobility as this promotes the use of cycling and walking. At a recent workshop run by the Urban Land Institute (Singapore), ideas were proposed to design cities of the future to encourage active mobility.

- **Make it convenient and efficient** – integrate cycling and walking infrastructure with public transit and bike share systems for cities to promote cycling;
- **Provide dedicated space for all** – protected bike lanes and cycle tracks alongside pedestrian sidewalks and vehicular carriageways;
- **Ensure visibility at junctions** – safe junction designs that allow drivers to look out for pedestrians and cyclists when turning as

well as painted cycling lanes at junctions to maximise and hold drivers' attention;

- **Maintain continuity of movement** – cyclist friendly junction designs with gentle bends to facilitate continuous cycling and continuous sidewalks that require cars to stop and allow pedestrians and cyclists to continue through intersections without stopping;
- **Keep it slow** – stringent speed limits; slow speed zones at high pedestrian traffic areas; and shared streets with design interventions to slow vehicles down and allow co-existence of road users;
- **Prioritise at-grade crossings** – to facilitate continuous movement by pedestrians and cyclists; use above/sub-grade crossings only for direct connections between destinations and diagonal crosswalks for high pedestrian traffic areas;
- **Ensure consistency in design** – standard infrastructure design for the whole network for user friendliness and consistent signage;
- **Make it comfortable and attractive** – street planting to provide shade and visual relief for all road users, sheltered walkways for pedestrians and prioritizing maintenance for pedestrian and cycling infrastructure;
- **Mix up the uses** – mixed use developments to make walking and cycling more convenient for daily commutes; and
- **Close the loop with end-of-trip amenities** – adequate public bike parking facilities at destinations with showers and laundromats at workplaces.

For cities to advance in the mobility of their citizens, this is universal advice that should be well heeded. 



Cycling facts

- According to a study of vehicle ownership in 44 countries by the Pew Research Center, households in Japan and Thailand rank second and third in terms of bike ownership globally (although both of these countries also rank high in vehicle ownership with 81% and 51% of their respective populations owning at least one vehicle).
- In 2007, there were about 130 million bicycles worldwide.
- In China 65% of households own a bicycle each and there are 170 bike sharing systems operating in the country.
- Taiwan has 4,017 kilometers of bike lanes and its bike sharing programme YouBike averages 10-12 trips a day for each of its 5,350 bicycles at 165 stations.
- Bangkok has 232 kilometers of bike lanes in the city.
- Singapore currently has 230 kilometers of cycle lanes, which are shared with pedestrians and has plans to extend this to 700 kilometers in the future.

MASS TRANSIT SUCCESS: INTEGRATED PLANNING & INNOVATION

By Anita Ho
Technical Director, AECOM



Asia is experiencing rapid urbanization. Governments are increasing expenditure in transport infrastructure developments to cope with sharp growth in city populations that has led to congestion, unproductively long commutes, high reliance on private vehicles and overburdened infrastructure. The more comprehensive development plans for major cities in the region tend to include mass rail systems as they have been proven to be able to move large numbers of people at reasonable cost to the users. This is the reason why Malaysia has decided to embark on its first mass rapid transit system project in the Klang Valley.

As rail developments require massive budgets, governments must carefully plan, structure and implement them to ensure transport policy objectives are met while being operationally sustainable in the long run.

There are valuable industry lessons learned from the experience of Hong Kong and Singapore, two cities whose metro rail systems have become case studies for sustainable and effective transport system management in the region. How have they made their rail systems so effective in reducing vehicle traffic, moving people efficiently and bringing economic value to the cities where they operate?

Hong Kong: Tapping into land values

Hong Kong's MTR Corporation is one of the world's most well-managed urban railway operators. The company, established in 1975 by the Hong Kong government to set up and run an urban metro system to meet public transport requirements, has a strong reputation for keeping high safety, reliability, customer service and cost efficiency standards. The company's Mass Transit Railway (MTR) system enjoys an average weekday patronage of over 5.5 million passengers. It also consistently achieves a 99.9% on-time rate on its train journeys and is one of the most profitable in the world, with a high farebox recovery ratio of 186%.

Due to its success, the MTR has served as a model for other newly built systems in the world. Not only does the MTR operate with high on-time performance, residential and commercial developments around the stations also ensure a high flow of rail users and provide an investment opportunity for MTR Corporation.

MTR Corporation operates as both a transit authority and a property owner, owning real estate around the system's stations. This makes a streamlined, integrated approach among agencies and developers possible when it comes to planning and execution.

As a consequence, planning for the MTR goes beyond rail infrastructure development, and takes into account growth and investment opportunities to ensure user-friendliness, sustainability and profitability. With MTR Corporation owning real estate around stations in the system, it means each of its developments complement the other and the company gains revenue not just from fares. Property development funds the maintenance and expansion of the rail line and increased property values of rail-linked developments raises the land rents which can then be used to cover capital costs.

Many potential riders live close to a station as developments around each MTR station are dense; over 41% of the population in Hong Kong lives within a half-mile of a station, meaning they can rely on the system for day to day movements. The MTR's strategy promotes easy access, making sure passengers get to stations easily. Dwellers of MTR properties can even walk from homes to a station without needing to step outdoors.

Singapore: Smart insights

Singapore's rapid transit system (MRT) is relatively new compared to those in other developed countries around the world. Although the first line started only in 1987, in such a short span of time the system has built a reputation for punctuality and highly efficient management thanks to the government's dedicated efforts and investments to make public transportation the preferred choice for commuters.

The government's priority in this area remains high; there will be 99 new trains by 2019 and by 2030, there will be new rail lines spanning the island, complemented by a network of cycling tracks, buses and covered walkways.

Built in one of the world's most densely populated cities in the world, with a population of 5.5 million people packed into just 700 square kilometres, the MRT is a critical backbone for the city-state's growth with an average of 2.6 million people taking the train daily.

As part of its strategy to make commuting faster and more efficient, the Ministry of Transport and the Singapore Land Transport Authority (LTA) are looking into smart technology to improve the public's experience with public transport, which of course includes the MRT, via the use of data analytics and smart interfaces.

As millions of commuters take the MRT every day, fare card data provide detailed analytics on mobility patterns and behavior as well as extensive data on locations of trains, buses and taxis. These can be used to develop more effective transport designs and policies.

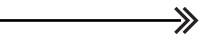
This data can also be used to develop systems to simulate and predict commuter crowding, behaviour and movements across the entire public transport system. For example it can help to understand the impact on crowd levels at different stations if additional trains are deployed or how to move crowds when service disruption occurs at specific locations at different times of the day.

Meanwhile, smart interface between commuters and transport service providers through transport applications such as MyTransport.SG containing transport information help commuters to plan their daily journeys on the MRT (as well as on buses and taxis).

Additionally LTA is also looking to develop a hands-free, contactless payment mode based on near-field communication technology that allows faster movement of crowds during peak hours.

Adopt, adapt

Urban mass transits are an integral part of today's dense city environment. For metro rail systems to work in the long run, incorporating high-density and mixed-use developments are considered strategically crucial, besides the ability to take advantage of land values to finance capital investment and outlays. Smart innovations to improve rider experience and interfaces are also a must, as people become more and more reliant on mobile and wearable technology to make daily logistic decisions. As Malaysia is on the verge of opening the country's very first MRT line, these are ideas that perhaps we can learn from, adapt locally and hopefully contribute to, for the advancement of the mass transit sector.



KL's Rail Ambition

Malaysia's per capita car ownership is very high with 20 million cars for a population of 28 million. It's estimated that by 2020, the population in Greater Kuala Lumpur will grow from the current 6 million to 10 million. That's a rather exponential growth over a very short period of time.

Kuala Lumpur's rail transport coverage is sparse with less than 20km per million population compared to more than 40km of rail per million population in other rail-oriented cities. The Klang Valley MRT project aims to boost the rail-based public transport coverage in Klang Valley significantly.

The KVMRT is part of Malaysia's Economic Transformation Programme, as one of the 'Greater Kuala Lumpur and Klang Valley (GKV)' initiatives designed to contribute RM190 billion in gross national income (GNI) over 10 years and create over 300,000 jobs. Spanning 141km, the KVMRT's three lines are expected to serve areas within a radius of 20km from city centre.

The first line, the Sungai Buloh-Kajang (SBK) Line will be fully operational from July 2017. The 51km line will comprise above and underground sections and is expected to serve an estimated population of 1.2 million, ferrying approximately 400,000 passengers daily.

Wide Ranging Impact

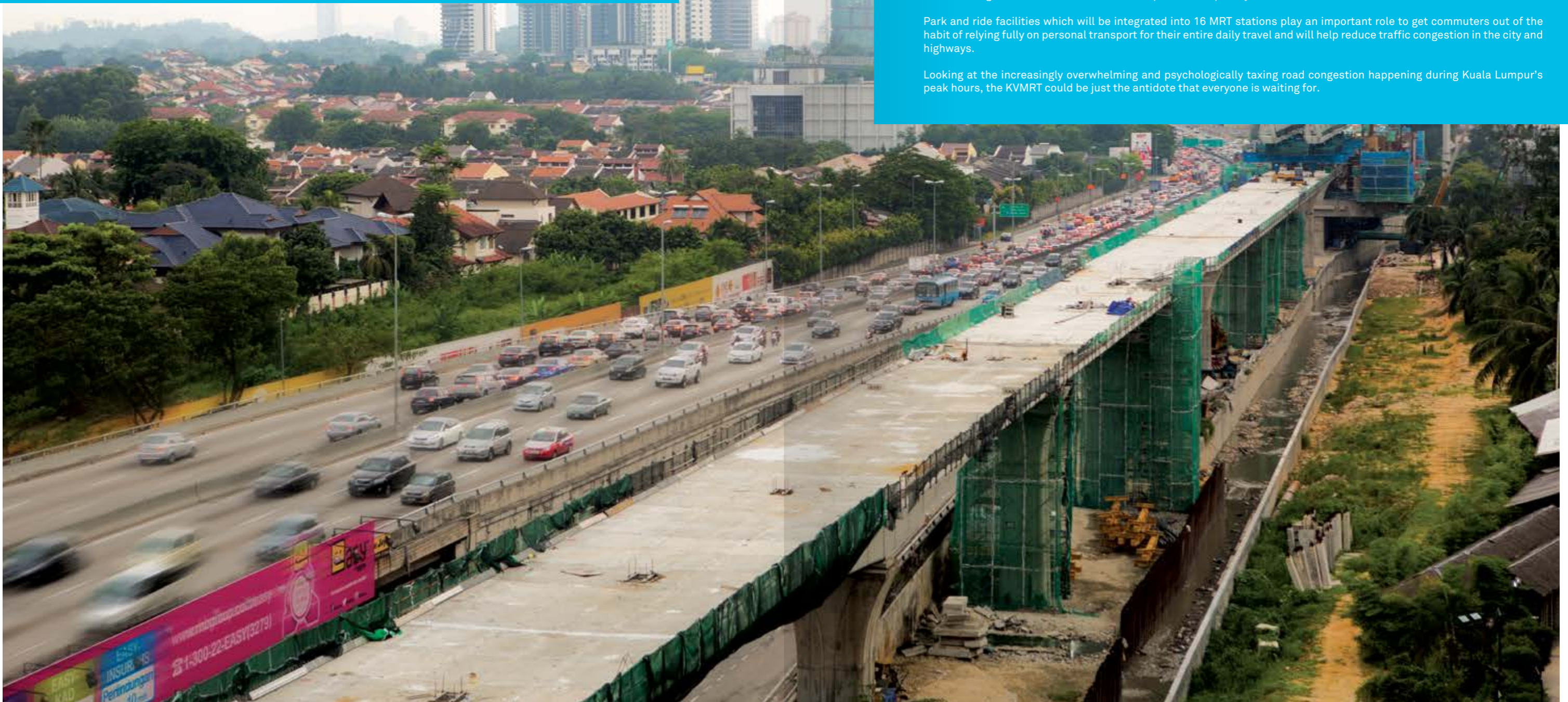
The KVMRT project not only benefits the general population in the Klang Valley, but it has a strong spillover effect on the construction, finance, logistics, manufacturing and professional services industries.

The government estimates that the MRT project will create more than 130,000 employment during its construction period and will generate RM3 – 4 billion per annum worth of GNI from construction and operations from 2011 to 2020. Additionally, RM8-12 billion per year will be generated from the 2.5-3.5 x multiplier impact from the construction. With the increase in productivity from better mobility in total, an average of RM21 billion GNI per year is expected to be generated over 10 years.

Property values will also benefit from the project thanks to the improved connectivity, with an estimated increase of RM 300 million in gross development value. Four new development areas linked to the rail line will open up namely the Rubber Research Institute development in Sungai Buloh, Warisan Merdeka, KL International Financial District and Cochrane. Projects like the KVMRT are set to play a significant role in boosting the modal share for public transport in Malaysia. Currently, the modal share for public transport is only 20% and according to Land Public Transport Commission (SPAD), only 5% of Klang Valley commuters use public transport during peak periods. SPAD is looking at a 40% modal share for public transport by 2030. It won't be an easy task to get people to move from cars to public transport but this perception will eventually change when commuters see how convenient the MRT is in providing mobility and connectivity, not just between neighborhoods but across different public transport systems.

Park and ride facilities which will be integrated into 16 MRT stations play an important role to get commuters out of the habit of relying fully on personal transport for their entire daily travel and will help reduce traffic congestion in the city and highways.

Looking at the increasingly overwhelming and psychologically taxing road congestion happening during Kuala Lumpur's peak hours, the KVMRT could be just the antidote that everyone is waiting for.



INNOVATIVE VIEWPOINTS

“IT’S UP TO US”



Tan Sri Dr Ahmad Tajuddin Ali is currently the Chairman of UEM Group Berhad, PLUS Expressways International Berhad and Linde Malaysia Holdings Berhad. He is also the President of the Academy of Sciences Malaysia and the Chairman of many prestigious organizations including the Standards and Industrial Research Institute of Malaysia (SIRIM), the Construction Industry Development Board (CIDB) and the Board of UTeM (Universiti Teknikal Malaysia Melaka). An engineer by training, Tan Sri Dr Tajuddin obtained his doctorate in Nuclear Engineering from Queen Mary College, University of London.

Do you think KL is a sustainable city? What is KL doing right?

KL in comparison with other cities, is still not the very best but in my view, it is at least in the top quartile. There are things we should be proud of. We are fortunate that we do not have a population pressure as in many other cities, especially in the developing world – yes, we are big but not that big. We still have a lot of green space in and around the city and historically we grew at a time when the economic prosperity was good enough to allow us to plan properly and put in the right infrastructure.

Other cities have two problems. Firstly, many do not have enough money to build the right infrastructure. In KL, particularly in the last three decades or so, we were helped by our oil revenue and our manufacturing sector, which provided financing for the opening up of our green field sites. So we had an advantage over other cities. However, in a way, our success brings problems. For instance, now we are too used to personal transport. This causes traffic jams which have become a way of life for us. So what is happening is that our public transportation suffers as people prefer personal transport to get to work and our traffic jams just get bigger. The other transport-related problem KL is facing is using valuable land for parking spaces in town.

Secondly, other cities face population pressures, which are thankfully not that severe in KL. We have managed to transform our urban slums into modern conurbations. But still, we are not the best. I have in mind cities like Singapore and Seoul which have dealt with growth successfully. I also admire Hong Kong where people live in apartments due to space constraints and they do not have to own cars as the public transport is so efficient.

How can innovation help KL’s sustainable development?

To me, innovation is a much overused word! I like to think that we can use simpler words, like how we can find ways to resolve problems. I would put innovation into various buckets. The first one is innovation

for ‘wealth creation’. Innovation through technology and product development can create wealth as we can sell our products [and skills] to the world. But in Malaysia it turns out that we are net buyers of technology and innovation. By and large, we are consumers of products rather than producers of products. For instance, we purchase technology for military use and commercial aircraft, we buy smart phones and computers – these are all imported and paid for by our hard-earned cash generated by our resource-based industries like oil palm and rubber, and our petro-dollars. The same thing happens with our foreign labour: please remember that for every RM1000 we spend on labour, perhaps RM 700 of this goes out of the country as the workers send their earnings back to their own countries. That why they are here in the first place: to earn money to send home! They are not here for the love of Malaysia!

The other innovation bucket I would like to suggest is that dealing with ‘process’. Innovation should help us do things more efficiently and sustainably. How can we influence the way we think and how we act so that we can do things better and more sustainably? Like using public transport instead of cars, as I mentioned earlier? It comes back to a basic question of sustainability. What we are doing is not sustainable in the long term. Let me take the example of the construction sector again. We need to build new infrastructure like flyovers, roads and ports but we have to use foreign labour who will work for lower wages than what our own people would be willing to accept. This is not sustainable as our local people need that work. But then our local workers are not prepared to work at that level of pay as they have families to support and they have the perception that construction work is ‘3D’ (dirty, dangerous and difficult) work. So we end up using foreign workers. We have to move upwards. We have to move up the technology and productivity ladders. I went to Hong Kong recently where I saw industry programmes run by the Hong Kong Construction Industry Council (CIC) which upskill local workers and make jobs higher paying for the local

workforce. In Australia, they have employed technology solutions for construction sites so they can pay workers more but use less manpower and this is quicker and safer as well as more cost-effective.

Is the current policy sufficient to meet our challenges?

This is an area we can do more. In my view, there is nothing deficient in our policies but what need addressing are the follow through and the consequential actions to make things happen as they are intended. This could be in the form of amendments to legislation or introducing incentives. In order for the right thing to happen, well-crafted policy statements must be able to be translated into tangible outcomes. We speak of the circles of concern and influence. We all have circles of concern but we can only do things through the circle of influence. The construction industry is currently within my circle of influence. On the 10th September last year, the government launched the Construction Industry Transformation Programme (CITP) aimed at enhancing the construction sector. The CITP specifically targets at enhancing safety, productivity and sustainability. The sustainability of the industry is very important, not just environmental sustainability but also business sustainability.

We must upgrade the capability of our larger construction companies in order to secure high value jobs both locally and abroad. It is vital for us to secure local projects otherwise we cannot compete abroad. But there are many foreign companies winning the jobs locally and taking them away from our local companies, especially the more specialised and technology intensive jobs. At the end of the day, a client looks at quality, delivery and cost. If we can match or be ahead of our competitors, then we can be successful and sustainable in the long term.

Do you think KL has sufficient resilience to withstand shocks and stresses?

This goes again back to basics. I like to compare ourselves with other cities. We are in the top half and even in the top quartile. But there are areas we can improve on. Fortunately, we are not prone to major catastrophes like earthquakes, typhoons and hurricanes that other cities face. As a city we have managed to remove slums from KL so we have reduced the vulnerability of people through decent housing. People need to be prepared to change their lifestyles from having individual housing plots to living in apartments. In the end, economics will help drive that. The challenge that we will face

in the future will be KL’s growth. Because of this, there is a need for more efficient public transport, so that we can be more economically productive. People should not take two hours to come to work and then two more to go home. We should be like Tokyo where people are moved into the city in the mornings and out in the evenings efficiently. Thankfully, we are transforming KL with the expansion of MRT and LRT lines. People are already living in the air [apartments], the next step will be people moving out to new conurbations outside of KL and building new living centres around transport hubs.

How do you think technology plays a role?

This has to happen. Here, we are talking about smart cities. To some extent, we have bits and pieces already as this is about managing the city better in terms of public transport and security. Technology can assist, for instance, in transport systems. We should do a better job in KL in disseminating real-time information on traffic conditions through the radio. In major cities, they have helicopters in the air giving live feed. Security is another point. Through technology like CCTV, we can achieve better public security.

We also can have elements of smart cities in our buildings. This application will increase through expanding the awareness of planners and professionals. In KL we have a lot of old buildings which must come down be replaced with new buildings. We can come up with intelligent and greener systems designed to replace existing ones. The case is different with new townships where we have green field sites. Here we can introduce smart systems from scratch. We are doing so in places like Iskandar Puteri (formerly Nusa Jaya) in the south.

Do you think there is adequate planning to meet sustainable growth needs?

As I mentioned earlier, KL grew at a time when the economic prosperity was good enough to allow us to plan properly and put in the infrastructure. We need to plan ahead for growth and how to cope with this through more infrastructure and public transport.

How can education play a key part in KL’s sustainability?

I believe that the young are more conscious of sustainability issues. The challenge is how not to let them become like their elders! At school level, there is a high level of awareness. There is the story of the kids scolding their parents for throwing away things but once they become older, they revert to the behaviour of their elders.

Sometimes it is the environment that affects the behaviour of people. We don’t litter if the environment is clean but we will behave differently if the environment is dirty. So we must work on the getting the conditions right as well.

How can we leave a legacy for our young?

Doing that little bit now for the future is very important. This is about giving back. This is about preparing for the future. What we do today will impact others 20-30 years down the line especially in education. It is important to do the right thing even if we are not around to see the outcomes.

Do you think Corporate Social Responsibility can help?

Sure, the private sector can do CSR if they are profitable. As always, charity starts at home and they must be able to help themselves first before helping others. However, our larger companies that are doing well should give back to society. I believe, everyone has an obligation, big or small.

Lastly, how do you see KL in the future?

I want KL to be efficient, clean and livable so that there is life in the city. We should emulate the best of other cities but we should have a city which people ‘choose’ to live in. KL has a lot going for it. Within 2 hours of travel, we can be in green areas and walking along jungle tracks instead of concrete paths. But we must be careful as our success may attract undesirable elements, which we must watch and control.

What can we learn from other cities? And what can we share with them?

I like Seoul, which has transformed itself into a new modern city. Similarly, the newer part of Tokyo – here, I am thinking of the Odaiba area – is impressive, where the authorities have rejuvenated the old city or planned new developments incorporating the elements of a green, connected and sustainable city. Singapore has a lot going for it. It is clean and efficient. For KL, we need to soldier on. We need to retain some of our heritage but we should rebuild to be more green and efficient – this should make our city folks enjoy living in KL. In the end, it is about the people. We should make people love and be proud of KL. That way, they help contribute to make it even more livable. [U](#)

FOR A HIGHLY LIVEABLE KL

Who are you and what is your role in your organization?

I am Dato' Suhaili Idrus, Senior Vice President in AECOM looking after the Oil, Gas & Chemicals market in Southeast Asia. I am also involved in developing business in selected, high profile projects across other business lines for AECOM in Malaysia.

What is your concept of sustainability?

Sustainability is a concept which implies countries or cities should meet the needs of the present without sacrificing the ability of future generations to meet their own needs. This definition leads to a broad deal of variations in terms of how countries or cities carry out their attempts to become sustainable. For example, a sustainable city should firstly be able to feed itself with a sustainable reliance on the surrounding countryside, power itself with renewable sources of energy (hydro, solar or wind) while at the same time produce the lowest quantity of pollution, efficiently use the land, compost used materials, recycle waste or convert waste-to-energy which will lead to an overall reduction in climatic change.

What are the main issues facing us?

Kuala Lumpur encounters many issues like other major cities but the key ones that require close attention by the authorities, NGOs and private organisations are:

- rapid urbanization leading to shortage of houses and infrastructure for mobility
- massive congestion on roads and highways during peak hours contributing to pollution and reducing productivity at work
- over reliance on private transport caused by insufficient public transport coverage in the Greater KL

- occasional flash flood after a heavy downpour leading to massive crawl along certain roads
- over reliance on land fill for waste disposal and low recycling habit by domestic households
- high amount of food wastage at hotels and restaurants
- inner city dilapidation requiring re-development e.g. Kampung Baru, Cochrane
- lack of green spaces for public to enhance liveability
- unreliable taxi service

Do you think KL is a sustainable city? What is KL doing right?

In a 2015 sustainability report of Asian cities by a global consulting firm, KL ranked second after Singapore in Southeast Asia and seventh in Asia in terms of sustainability. However, to the public at large there are many areas for improvement and KL is taking the right steps towards maintaining this status.

For example, major rail projects are being built or planned to increase the public transport modal share to 40% by 2030 (it was 18% in 2014) like KVMRT Lines 1 and 2, LRT 3 (Bandar Utama to Klang), LRT Extension Line (Kelana Jaya & Ampang Lines) and the KL-Singapore High Speed Rail project.

The Federal government has also called for a tender to build a 1000-tonne per day waste incinerator in Kepong that can generate 35MW of electricity and reduce dumping at the Bukit Tagar landfill. City Hall is taking steps to clear clogged drains, one of the main causes of city flash floods. In terms of city rejuvenation, some old areas in

KL will be re-developed by government and private sectors e.g. Kampung Baru, Semarak, Sungei Besi (Bandar Malaysia) and Cochrane. Under the ETP (Economic Transformation Programme), City Hall has planted more than 100,000 trees over 2012-14 to improve the greenery while the River of Life project will not only improve the water quality of the rivers straddling KL but also beautify the 11km stretch between Gombak and MidValley Mega Mall. This will enhance the liveability of KL and make the place more vibrant to locals and visitors. City Hall has also built nearly 40 km of pedestrian walkways (some covered with roof) in the city's tourist belt to facilitate connectivity with places and public transport terminals.

How can innovation help KL's sustainable development?

Innovation and new ideas can speed up the move towards becoming a sustainable city. This is because the world is evolving and cities pursue their route to sustainability differently depending on local conditions. By tapping on new ideas generated locally or adopted from other cities, KL can fast track its aspiration to become a sustainable city in a short time frame. This can be achieved through best practice visits, conferences and seminars on sustainable city developments. AECOM together with Yayasan Wilayah Persekutuan (under the Ministry of Federal Territories) set up KLCSI a few years ago as a centre of excellence to advance sustainable urban developments in Malaysia. KLCSI aims to fast-track research as well as test and deploy commercial products and consultancy services in order to enhance the quality of life across Greater KL.

Is the current policy sufficient to meet our challenges?

Generally the government, including local authorities, is amicable to new ideas to enhance sustainability as demonstrated by various engagement sessions including reviews of policies that contribute towards sustainability. The KL Mayor is fully aware of efforts by various agencies to attract companies, professionals and retirees to KL and is always listening to issues or problems faced by these groups. The Federal Territory and City Hall support was crucial in the setting-up of KLCSI. InvestKL, a government agency formed in 2011 to attract multi-national companies to set up regional headquarters in KL has succeeded in bringing 51 MNCs up to 2015. I quote their CEO Datuk Zainal Amanshah who summed KL's dynamism succinctly,

"KL is a cosmopolitan, vibrant city with an increasing ease of doing business. We are also fast emerging as a regional hub for business, talent, innovation and creative content."

Do you think KL has sufficient resilience to withstand shocks and stresses?

Not entirely as demonstrated by the recurring flash flood despite the heavy investment in the SMART tunnel to divert water during heavy downpour. During the dry season, parts of KL are sometimes subjected to water rationing due to low water levels in the surrounding dams. But the good thing is the relevant parties e.g. City Hall and the Drainage and Irrigation Department are willing to listen to the public and resolve the problems and they continuously learn from past incidents.

How do you think technology plays a role?

Technology has an important role in enhancing sustainability across various facets of the city's activities. In transportation the use of smart technology in popular ride-hailing apps by Uber and GrabCar can offer an alternative to conventional taxis. In urban rail transport, an integrated cashless ticketing system will facilitate inter-mode public transport usage. And roof top solar panels should be encouraged to diversify away from fossil fuels and rainwater harvesting installed in homes to reduce dependency on treated water.

Do you think there is adequate planning to meet sustainable growth needs?

Yes and this is the joint responsibility of City Hall and the Federal Town and Country Planning Department with both reinforcing the policy-based growth management strategies with statutory planning measures incorporated in all the City's structure plan and local plan. The National Urbanisation Policy forms the fundamental framework of KL City Plan 2020 which promotes liveable communities as well as sustainable urban development.

How can education play a key part in KL's sustainability?

Education plays a crucial role in the sustainability of KL as the nation's capital and main commercial hub by providing a pipeline of human capital in various disciplines to meet the needs of both public and private sector. Without this continuous supply of human capital, KL will lose its attractiveness to business, investors, tourists, retirees, etc. Secondly, the understanding on sustainability should start early in schools so that the attitude of children on sustainability can be molded when young that can shape their behavior as adult.

How can we leave a legacy for our young?

We need to preserve the environment and our heritage for the next generations as much as possible. There are many examples that point to this doctrine – reduce dependency and on fossil fuels by increasing the use of renewable energy, adopt the 3Rs (Reduce, Reuse & Recycle) in waste management, create more green parks, love and take care of rivers, refurbish historical buildings, etc.

Do you think Corporate Social Responsibility can help?

Corporate Social Responsibility or CSR from the private sector in any form is certainly welcomed as the public sector cannot afford to bear the full burden of achieving or maintaining sustainability in major cities.

Lastly, how do you see KL in the future?

KL has a bright future ahead if all the various stakeholders are aligned with the same vision to be a Top 20 World's Most Liveable City by 2020 (according to The Economist Magazine Index). Even if KL fails to achieve this position, the effort and projects mentioned above will go some way in making the city sustainable.

What can we learn from other cities? And what can we share with them?

Definitely a lot and the KL Mayor and the Federal Territory Minister visit selected cities from time to time to learn on how they manage sustainability and adopt some of these lessons locally. AECOM has organized such visits for the Mayor and Federal Territory Minister to Philadelphia, New York, Boston, Los Angeles, San Francisco, San Antonio, Sydney and Singapore in recent years to share our experience in innovative planning and developments. [\[1\]](#)

Dato' Suhaili has over 35 years of experience holding a variety of technical, commercial and transformation positions in Malaysia and abroad. He is an expert in oil (crude and products) and LNG supply and trading, which includes logistics for movement of crude, products and chemicals in ships and containers of various capacity. Throughout his career in the private sector, Dato' Suhaili has led multi-disciplinary teams in contracts negotiation and management, project development and tracking of project delivery. He was also involved in the production of blueprints for investment and mobilization of social programmes for the Iskandar region in Johor, in addition to the execution of governmental transformation programs on a national scale. Dato' Suhaili has comprehensive knowledge of issues and challenges in urban public transport systems, town planning and rejuvenation, and the start-up and monitoring of major infrastructure projects.

LIVING LAB UPDATES

Community Centre 2.0 - Intergenerational Living for the Future

KLCSI is involved in the design and development of an innovative community centre in Sentul that will cater to the needs of the immediate local community - the elderly, adults, youths and children. The centre's facilities and programs will cover health, social, recreational and educational purposes. Together with Yayasan Wilayah Persekutuan we are exploring a new community centre model for intergenerational care that can be easily replicated across other communities in urban areas across Malaysia.

From a physical perspective, the centre will be built using Industrialised Building System (IBS) construction technology to reduce construction cost and time while improving quality. The centre will also explore cost-effective and practical green building designs as well as technology and practices that can easily be adopted by homes in the community.

This centre will be designed specifically with the local community in mind, after a careful study of the demographics and lifestyle patterns in the area and identifying any gaps or needs that are not being fulfilled from the perspectives of a wider community. It will be more than just a building for meetings and events. The centre will be designed to be:

Inclusive. The community centre will be designed to meet the basic needs of the local community regardless of age, beliefs and social standing. These include a safe environment, modern technology, adequate facilities and open spaces.

Active. The community centre will actively provide products and services that the community need or want like classes, activities and assistive tools. These will be provided at a discount through sponsorship.

Adaptable. The centre will be able to adapt to the changing needs of the community over time as the centre will be conducting quarterly stakeholder focus groups.

Sustainable. The centre will be a showcase for sustainable living that the community members can adapt and apply in their own homes such as urban gardening, waste recycling and energy efficiency.

Turning Food Waste into a Resource

KLCSI is working with LA21 on the design and establishment of an innovative food waste recycling scheme in a PPR complex located in Intan Baiduri, Kepong, Kuala Lumpur. The food waste will be collected from individual apartments, processed on-site into compost and used to grow an urban farm for residents. The waste recycling scheme is innovative in that it eliminates transportation costs, which is usually the largest component of operating costs for this type of business. This scheme can be easily replicated across other communities in urban areas across Malaysia.

The aim is to develop a small-medium (~ 50 ton/year) scale cost-effective municipal organic waste composting facility. The facility will not only accept food waste but also green waste (cuttings, leaves, grass etc.).

The diversion of municipal organic waste from landfill disposal will extend the life of the latter and reduce greenhouse gas emissions and other adverse environmental impacts. To sustain the composting facility, socially and economically, KLCSI is obtaining the buy-in of local communities and stakeholders.

Food waste can be tackled by various means. The simplest form is composting, which is the breakdown of waste using an enzymatic accelerator. The breakdown process requires air, daylight, water and space. Compost is rich in nitrogen and carbon, essential elements for healthy plant growth. Typically, food waste recyclers rely on commercial sources (like hotels and restaurants) and employ different means of utilization like aerobic digestion and anaerobic digestion. The latter will generate methane gas but requires scale and is capital intensive. The main operating cost of recycling is transportation of the waste. In this case, KLCSI is going down an unconventional route by locating the composting facility on-site so transportation costs are minimal and we are using domestic households as our source of food waste. Domestic households are more onerous as this is dependent on good sorting at source but this also serves as a means of public education on use of resources.

The other challenge facing waste recyclers in general is the uptake of recycled materials and ensuring that there is sufficient demand. In many cases, particularly for compost, there is insufficient market demand leaving surplus stock which makes the business model flawed. As the residents will be setting up an urban garden, there should be a robust demand for the compost.

BikeShare for Labuan - Cycle Power for the Masses

KLCSI is working with Public BikeShare to introduce a BikeShare scheme in the island of Labuan off the coast of Sabah. Labuan is an island of 87 square kilometers with a small population of 100,000 but it has tourism, offshore finance and oil & gas activities as its many focus areas. The setting is ideal for cycling as the terrain is flat and the distances to travel are short.

As part of a wider low-carbon plan for the island, KLCSI and Public BikeShare will be using the BikeShare model to promote cycling in Labuan. The BikeShare scheme provides a flexible and cheaper mode of transport by forming a sustainable and connected transport system. BikeShare differs from bicycle rental in that the units are a combination of smart technology and innovative bicycle design and the stations are hubs for other applications like wayfinding and public information. Bicycles are shared across the network by users as opposed to rental from a single point.

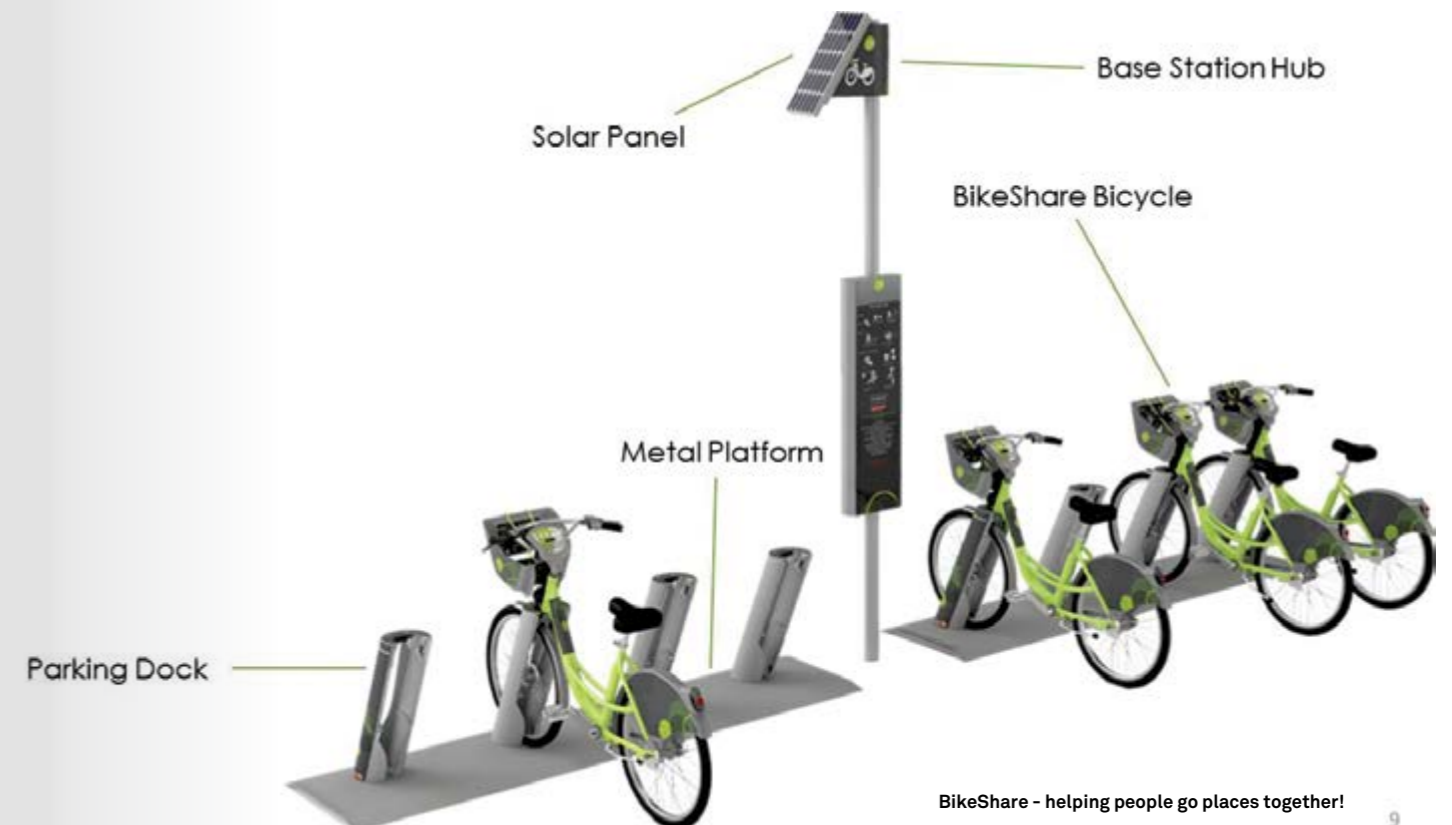
Labuan's development plan emphasises the ambitions for tourism growth and the need to reduce urban traffic so the BikeShare scheme is well-suited to the island's aspirations. KLCSI will be testing a six-month pilot with 10 bikes before scaling upwards. Public BikeShare are already running successful models in Melaka and parts of Kuala Lumpur. [U](#)



Community Centre 2.0 - functional and inclusive.



Food waste can be a useful resource.



BikeShare - helping people go places together!

6

AN AGE-OLD ISSUE

By 2050, it is estimated that one in five persons in Asia will be over 65 years old. In general, better healthcare and a shrinking birthrate means that we will be supporting an aged population which may have limited means to fully enjoy retirement.

This phenomenon of disproportionately larger ratios of elderly populations will be most pronounced in urban centres where city dwellers tend to have smaller families or none at all. So how do we deal with this social time bomb that is ticking inexorably towards detonation?

The elderly are in better shape than before

Active ageing is one solution. Policy makers are experimenting with the idea of extending retirement ages and retraining elderlies as well as discouraging age discrimination at work. With longer employment periods, the knowledge and experience offered by graying workers can be retained and applied. This is good news. Physically and physiologically, the elderly today are in better shape than their forbears and with decent amounts of disposable incomes available, they can keep themselves active by engaging more in leisure activities and by working longer. On the flip side, this solution delays the problem instead of addressing it.

The psychological challenges faced by this segment of population are more onerous. Research has shown that a lack of mental stimulation tends to lead to the degeneration of the mind followed rapidly by physical deterioration. With modern apps and smart phones, one would assume that there are enough tools to keep one's mind active. The reality is that the underlying fear of technology still preys on many of the elderly, especially those who grew up in simpler times. The older generation relied on personal rather than virtual relationships so adoption of social media such as Facebook and Instagram among the elderly technophobes may still be a few years in the making, at least for now. But there are opportunities in harnessing technology - speech recognition, for example will be a useful solution to promote computer familiarity for the aged population. But living longer does not mean living better.


With advanced ageing comes the possibility of dementia and frailty. Dementia is a

manifestation of brain degeneration and sufferers need individual care and attention. This is best given by family members although with fewer adult children and with family units that are dislocated, this proves to be a fraught task. Governments can help by making children responsible for their parents along with providing subsidies to build intergenerational homes and communities; this also promotes jobs for in-house care givers.

Resilience to deal with the onset of frailty is based on fostering a sense of dignity, which in turn can lead to independence and self-reliance, for which there are a number of assistive tools and technologies. The first thing to provide is security and well-being. There is a growing market for devices which can track and monitor old people. Future innovations like 'smart clothing' with built-in sensors will be available to measure bodily functions and alert wearers when medication or physical attention is needed. With the advancement in biomaterials, we should not dismiss the future possibility of better and cheaper options for implants replacing worn out parts like teeth and bones or even organs. Exo-skeletons, the pipe dream of science fiction writers, may be closer to reality than one thinks. In addition, as there are likely to be more females outliving males, these technologies can be made gender specific.

Can we age where we live

As people age, they become more reluctant to move to strange new places. Relocating the old to elderly homes is a convenient option for all except the ones being moved. Ageing in place is another alternative that should be considered. As this requires adjustment of living conditions and lifestyles, homes should age as gracefully as their occupants. This means simple adjustments like fewer stairs, accessible toilets and eliminating potentially dangerous conditions like slippery bathroom floors and sharp edges in rooms. There are a number of elegant solutions to these problems such as voice activated lights, padded surfaces, motion sensors to detect if someone has fallen over and specially adapted touch pads for arthritic fingers. Mobility can be assisted too, with products ranging from lightweight and stylish walking frames to sophisticated wheelchairs that can climb stairs.

In the end, the challenge is affordability. Governments should play their part by encouraging more savings and developing state pension schemes that will provide financial security for the elderly. Unfortunately, these well intended ideas go hand in hand with institutional challenges like administration, inflation and political stability. But the good news is that the private sector stands to gain the most; there is an estimated US\$3 trillion market in the ageing sector in Asia, largely composed of homes, infrastructure, leisure services and healthcare. An integrated approach is needed, using private investments channeled by shrewd and forward-looking government policies. The future is silver. 



NADI KOTA

Highlights of KLCSI's recent events & activities in and around town



Sustainable Views.

KLCSI was interviewed on 'Between the Lines' on Channel News Asia at the recent World Cities Summit 2016, for an episode on sustainability. KLCSI was privileged to share the stage with Benedito Braga, President of the World Water Council and Prof. Asit Biswas, Distinguished Visiting Professor, Lee Kuan Yew School of Public Policy, Singapore and co-Founder, Third World Centre for Water Management



Nothing Wasted.

KLCSI presented at the Clean Enviro Summit, which took place in Singapore from 10-14 July 2016, on the topic 'Can Cities Unlock the Resource Potential of Food Waste?'



Financing Cities.

KLCSI attended the World Cities Summit 2016 which took place in Singapore on 10-14 July. A highlight of the event was the launch of the New Perspectives on Climate Finance for Cities report.



Model Citizen.

KLCSI visited IRIS Corporation Berhad at Technology Park Malaysia, Serdang, Selangor, to observe how the company uses its rooftop to grow edible plants using hydroponic techniques. Fish and chicken are also reared to provide waste as nutrients to the plants. Two model houses have been constructed to showcase innovative low cost building materials which are energy efficient and affordable.



Big on Nano.

KLCSI visited the Nano and Advanced Materials Institute (NAMI) at the HK Science Park in early May 2016. NAMI has developed nano materials for a number of applications ranging from building materials to clothing. They are also developing commercial prototypes for bio-algae air cleaners and miniaturized electronic components. Visit www.nami.org.hk for more info.



A Healthy Cycle.

KLCSI participated in a panel discussion at the PJ Eco-Mobility Fair held at Taman Jaya, Petaling Jaya, in May 2016. The panel discussed how to promote cycling as part of sustainable living and how the park infrastructure could be improved for safety and convenience.

MAKING THE GOLDEN YEARS THE BEST YEARS

Malaysia has an ageing problem. Compared to European countries which took 100 years to double their populations aged 65 and above, Malaysia will take only 23 years to double from 7% in 2020 to 14% in 2043. This is a reflection of longer life expectancy, good public healthcare and smaller families – all robust signs of a developed society - The downside is that we do not have much time to prepare for a new set of issues that come with ageing.

What are the challenges that an ageing population brings? Firstly care and attention of the elderly will be critical. The old are more prone to chronic diseases, sleep disruption, psychological problems and cognitive decline. Healthcare models will have to be reconfigured to cater for the aged who have spent a lifetime of modern living with all the associated stresses. Housing will another challenge as homes designed for the young and active slowly become difficult for the elderly to cope with. Whilst ageing in one's own place is undeniably the best approach for a greying population, the practicalities of navigating stairs and squat latrines become physically insurmountable as one ages. Moving to aged care homes is a possibility but not everyone can afford the high end comfortable places instead ending up in homes of a basic nature at prices they – or their offspring - can just manage. There are many other problems but the immediate one that springs to mind is degeneration both physically and psychologically. Even with extended retirement ages, there will come a time when we all cease working and attempt to maintain a level of activity in our lives to keep ourselves occupied. The converse is rapid deterioration when retirement is epitomized by emptiness and boredom. Much of our social stimulation is triggered by human company. Deprived of the latter, it is easy to see how decrepitude becomes synonymous with being abandoned or ignored.

A simple solution to the challenges represented above is to promote more intergenerational living. Houses are expensive at the best of times so an affordable housing model for the young could be to share living quarters with the elderly. This occurs anyway as children age and they cannot afford means of renting or owning their own homes so they spend their adulthood living with ageing parents. In Japan, 40% of older people live with their adult offspring and over 17% live with their grandchildren in contrast to the UK where less than 10% of those aged 70 and over live with their adult offspring and around 2% live in multigenerational households with offspring and grandchildren. Does this mean Asian families are more amenable to this idea? Non-familial models also exist. Home sharing is where an older person offers accommodation to a younger person at a reduced rate in exchange for some support with basic tasks such as shopping or gardening. Co-housing is the development of private households with shared facilities that invoke a sense of community.

But, other than family ties, it would be justified to say that the intergenerational housing model has not taken root in any large measure in Malaysia. This is possibly due to the unpopular notion of having to share facilities with strangers, and elderly ones to boot. But the benefits exist - older people can benefit from reduced levels of loneliness and isolation and increased levels of civic participation, while younger generations can also gain in similar ways and through the provision of affordable housing.

In an interesting experiment in Alicante, Spain, using an ingenious blend of subsidized public rental housing, grants and low interest mortgage loans, a government agency set up over 200 affordable, intergenerational housing units in central urban areas. Residents included low-income older persons

over the age of 65 and low-income young people under the age of 35 in a ratio of 80:20 respectively. In the selection process, priority was given to those more advanced in age and with the greatest socio-economic disadvantage while young people were chosen based not just on low income but also on motivation, empathy and suitability to work in social programmes. On the basis of a 'good neighbor agreement', each young person had responsibility for four older people in the building. Feedback from the elders included an increase in well-being, independence - but not loneliness - a decent home life with a family-like environment and a wide range of activities within reach. For the young people, in addition to accessing high-quality housing at affordable rental rates, they reported knowledge gaining and the opportunity to nurture real relationships of friendship with the older persons they assisted. Key to all this was the application of self-managed activities like dancing and gardening to promote social integration and the creation of a 'big family' environment, which ended up more valued than the accommodation itself.

Applying the intergenerational model to a Malaysian city like Kuala Lumpur can be done but the following challenges must be borne in mind:

- Establishing a relationship between generations can be fraught if individuals do not want to share.
- Ability to find the right young people with the appropriate skills and aptitude can be difficult not only due to cultural and religious differences but also social upbringing and behaviour.
- The right activities must be designed to involve the elderly in a Malaysian context.

Lastly the financing of such housing is complicated due to the lack of government resources (always a challenge) as well as inadequate savings from the

elderly to sustain their twilight years. Some of the latter could be addressed by imposing responsibility on the children of elderly to provide funding through a 'parents tax', a sort of inverted responsibility model where children have an obligation for their parents. But for singletons who chose not to have offspring, this is one more gap in resources to add to the financial challenges already encountered.

A starting point for this new radical thinking would be to test an intergenerational community care centre where grandparents mingle with youth and toddlers. Japan has demonstrated that that this arrangement actually works well with the elders being stimulated by the presence of young people around them. Providing facilities such as IT and urban gardens can form the right platforms for interaction and intergenerational learning- in some cases reverse mentoring from young to old can be just as effective as the conventional vice versa transfer of knowledge and experience from old to young. Such building facilities can further be a show case for assistive technologies, green practices and innovative care models.

The time is right to adopt this model as it tackles the dual problems of affordability and active ageing. This is how to make the golden years our best years.

This paper was prepared for and presented at the Healthcare Forum organised by the Asia Strategy Leadership Institute in March 2016 by Dr Thomas Tang, Managing Director of KLCSI.



