

“Technology and Innovation for a sustainable integrated urban public transportation towards the implementation of an efficient mobility and environmental friendly transportation for Malaysia”

Automobiles, especially cars, are the main cause for the phenomenon of urban sprawls throughout major cities of the world. Urban sprawls, at the risk of oversimplification, are often responsible for deforestation and the rapid urbanisation of prime agricultural land. Despite the many detrimental effects of the automobile, it largely still remains an indispensable entity in our modern lives. The absolute convenience offered by the automobile is largely unparalleled. The way we design our cities largely dictates how we live our lives, contributing to larger effects of culture.

Does that make us want to rethink how our cities are organised? Poring over an urban plan of a city, one will find that buildings, parks or green spaces, and roads are the three main constituents of modern day settlements. In America for example, roads and access way often make up more than 45 percent of urban spaces. When we do consider sustainable urban planning, we often work with the three main constituents of a city, the built, the unbuilt, and the connections between the two. The connections are the various forms of transportation networks. There are several modes of transportation networks that have been used in urban planning over the years. Trains, buses, metros, private cars, bicycle, boats, trams and buggies are some of the major transportation devices that aim to forge meaningful connection within a city.

In ancient cities of the older civilisations, like those in India, Egypt, and the Mesopotamia, walking, horse-drawn carriages or boats were the main modes of transportation. But with the development of the automobile over the years, the use of the private automobile, or cars, has increased rapidly. Today, the incessant use of fuel for running cars and their emissions are a cause of grave concern. The heat-island effect, caused by roads, parking spaces, and other such infrastructure made up largely of concrete and asphalt, is show to be contributing to the rising temperatures and global warming. The futility and inefficiency of driving is slowly gaining front. In almost all major cities, people spend hours driving or getting stuck in traffic, thus throwing away precious time and money.

Malaysia is currently undergoing revitalization of its urban transportation system. In the past decade, the nation has witnessed the upgrading of current transportation module which has brought us up to new heights of modernization. However, Malaysia has a history of car domination, where each household has a minimum of 2 vehicles. This ultimately led us to a point of congestion that became the urban living nightmare for anyone who enters the city centre.

This attitudinal change is in lieu with the supply of reliable public transportation, which has been dismal till few years back. The share for public transport's dropped from 34% in 1985 to 20% in 1997 and is now closer to 10–12%. Take the Klang Valley for instance. Commuters face congestion, improper planning of stops and stations, unreliable service, limited connection and worst of all, accessibility factor has been cited along with safety & security. For most developing or developed countries, connectivity to transportation hubs and connectivity within the area is critical for urban

growth and improved productivity. Shifting into service oriented, efficient and cost effective mode will create better focus to overcome our problem

How can we alleviate the grievances caused by the automobile? In our efforts to turn our cities into agents of sustainability, can we redesign our cities to ensure automobile are no longer a necessity?

The government has taken several key initiatives to garner public confidence and improve our urban transportation system. The EPP Four by PEMANDU for instance looked into the construction on mass rapid transit (MRT) which means alleviation of congestion and increased accessibility to, from and also within the city. The MRT project will also be contributing towards the public transport modal share from 12 % currently to 50 % .Other than that, sound infrastructure, free public transportation, woman coaches on KTM rail are several plausible efforts made to revamp the system.

This paper is suggesting that more sustainable and efficient transportation be placed in cities as part of the backbone transportation infrastructure for the cities. Having a smart public transportation system will make the existing and future cities more livable for human habitation. A more energy efficient public transportation creates more human to human interaction as well as to enrich the life of the city dwellers to enjoy the quality time within human and nature.

Transportation is seen as the people mover to the economic centres of urban fabric.

Without efficient transportation, there can never be productive economic and public administrative transaction. Everything would be in a standstill.

It is in our best interests if our cities could avoid the urban exodus and sprawls and become self-contained features that are self-sustaining. There are many ways, of course, to ensure a city is car-free. As governments around the world begin to offer economic incentives for car owner to either ditch their vehicles or switch to eco-friendly automobiles, there is a lot of focus on how best to move away from a perceived necessity whose side effects is appalling. One way is definitely to channel the main transportation networks into public transportation that are fuelled by green electricity. But although that helps to cut down emission. It does not address the detrimental heat-island effect. In this case, is going vertical the answer?

Sometimes even the best of technology can hamper the popularity of the seamless urban public transportation due to public and private sector implementation method or even in conflict with other national economic agenda.

Balanced and amicable initiative system would bridge such issues.

Vice-versa, life after work would also be a standstill and unproductive. Loss in human social interaction, quality of life due to loss of valuable time in the congested transportation corridor.

Apart from smart transportation, we need to relook at the components of the current, existing transportation corridor as land is getting scarcer.

As land is getting scarcer, more creative and viable transportation and development mix needed to be addressed i.e. in the form of T O D or Transport Oriented Development, P O D or Pedestrian Oriented Development as well as G O D or Green Oriented Development.

Even if new corridors are being opened up, it needed to address the issue of walkability, timing congregation and disposal of people from any point of economic nodes within the urban fabric.

Such transportation modes i.e. electric bicycles, electric cars, electric shuttle busses should be seriously considered and be integrated.

Therefore this paper is timely towards the development for a more sustainable cities development especially in Malaysia.

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