



ALTERING TRAVEL AND DRIVING BEHAVIOUR WITH ITS

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INTELLIGENT TRANSPORT SYSTEM
ASSOCIATION OF MALAYSIA



	Malaysia	Taiwan
Population	31M	23M
Area	330,803km ²	36,193km ²



Malaysia



The Need for ITS



Population

31M, projected to rise to 46.1 million population by 2040



Vehicle Ownership

>21M, ave growth rate of 6% pa



Federal Road Network

50,000kms



Tolled Highways

30+ expressways, 2000kms

*... over 70% of
Malaysia's population
now live in urban
centres ...*

... about 46% of all registered vehicles are motorcycles ...



.... Malaysia has the highest road fatality risk (per 100,000 population) among the ASEAN countries and more than 50% of the road accident fatalities involve motorcyclists...





“... In 2016, total of 7,152 people died in road accidents in Malaysia, an alarming jump from 6,706 deaths in the year before...”

NST, 18 January 2017



... A World Bank study showed that in 2014, economic losses due to traffic congestion in the Klang Valley was RM20bil – that's RM54mil a day. The majority of this cost is associated with lost productivity

STAR, 12 Dec 2015

ITS Driving Behavioural Change

- ❖ Active technologies and interventions
- ❖ Passive technologies and interventions

- Data acquisition, analytics, predictive systems
- Monitoring
- Enforcement
- E-Payments
- Traffic Management Systems
- Traveler Information Systems, journey planners
- Telematics – guidance systems
- In-vehicle safety systems, on-board driver assist systems

All tolled highways in Malaysia
are now fully ETC



Multi-lane free-flow



Drivers



Green mobility – reducing CO2 emissions from transport modes



Safety – reducing accidents in an ageing global population



Convenience and Reliability – allow users the information to make timely and informed choices

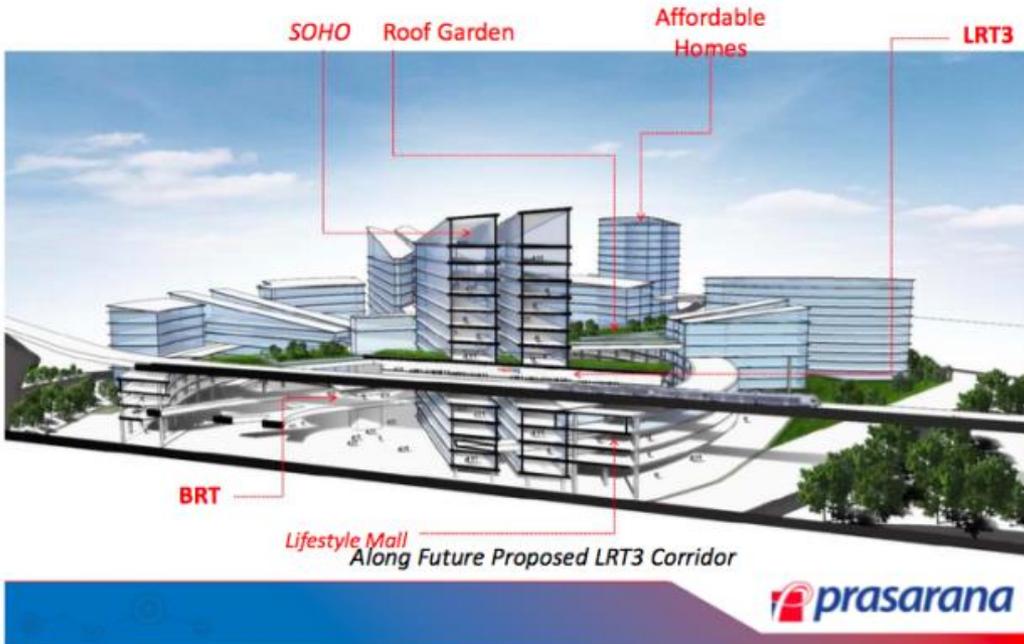


Connectivity with wide spectrum of mode choices

Influencers

- ❖ Smart Cities / IoT
- ❖ Connected and Automated Vehicles
- ❖ Mobility as a Service
- ❖ Artificial Intelligence

Proposed TOD : Greater Kuala Lumpur



... Malaysia's current urban mobility focus is mainly in public transport infrastructure and TODs...





- ❖ MRT 1: RM 21B
- ❖ MRT 2: RM 32B, u/c
- ❖ MRT 3: planned

- ❖ LRT 2: RM 8B
- ❖ LRT 3: RM 9B, u/c



Malaysia has pledged a 45% reduction in CO2 emissions by 2030 following the Paris climate deal.

- ❖ *transport accounts 35% of total energy consumed*
- ❖ *approximately 50 million tonnes of CO2*



ELECTRIC MOBILITY BLUEPRINT

Plan targets to make Malaysia marketing hub for EVs by 2030

JOHOR BARU: Malaysia is expected to become the marketing hub for electric vehicles (EVs) by 2030, which is the country's main target under the National Electric Mobility Blueprint (EMB).

Energy, Green Technology and Water Ministry secretary-general Datuk Seri Dr Zaini Ujang said the plan focused on three main sectors, namely EV development for transport and private ownership, EV ecosystem and EV economy.

"EMB is part of the government's efforts to introduce EVs to replace diesel or

petrol (vehicles) to reduce dependency on fossil fuel as well as greenhouse gas emission," he said during his speech at Universiti Teknologi Malaysia, Skudai, near here, yesterday.

"It is also aimed at making Malaysia the marketing hub for electric vehicles, with a target of 100,000 electric cars, 125,000 charging stations, 2,000 buses and 100,000 motorcycles on the road by 2030, and indirectly reduce carbon dioxide emission in the transportation sector."

Bernama

Key Influencers in ITS



SMART CITY
ISKANDAR MALAYSIA
[Edition 2.1]



Key Influencers in ITS

CARS IN 2025

In the coming years, the automotive industry will undergo a profound transformation – the cars it builds, the companies that make them and the consumers who buy them will look significantly different.

Getting our infrastructure ready
for EV and connected cars



75% Of cars on the road will be
autonomous by 2035²

Key Influencers in ITS

Mobility as a Service

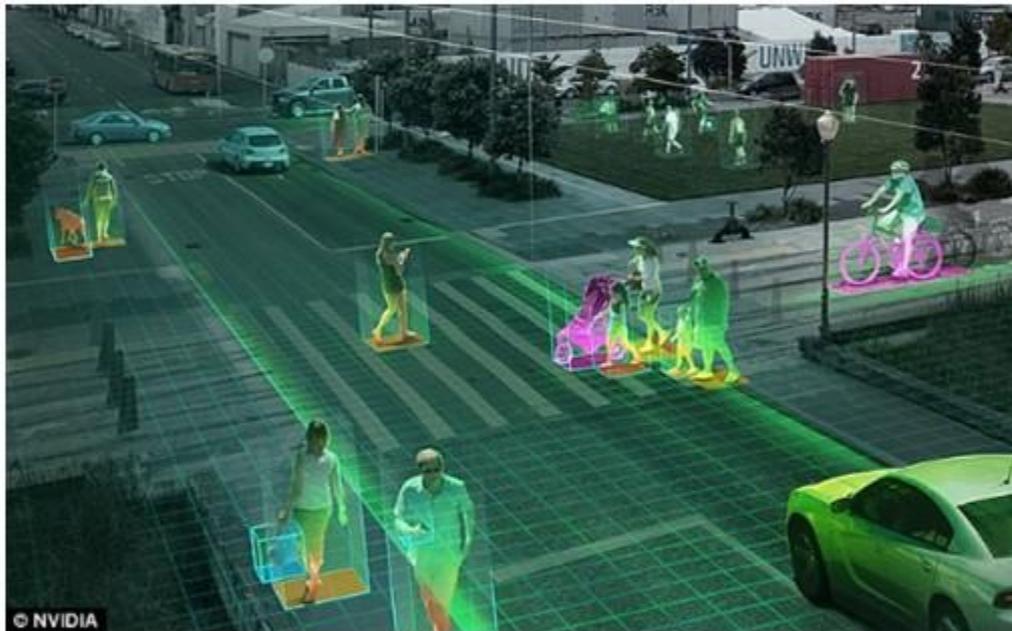
... the majority of vehicles worldwide are idle 95% of the time...

Generation X
Generation Z
Millennials
Baby Boomers



Key Influencers in ITS

Artificial Intelligence



“... AI systems are being planned in self-driving cars that 'watch and learn' to understand how traffic works...”

Summary

- ❖ ITS is shifting into a new normal.
- ❖ Industrial Revolution 4.0 will change travel behavior.
- ❖ A new social and technological revolution is upon us. Personalised mobility is the future.
- ❖ Traditional planning and design methodologies needs to be reviewed.
- ❖ 4 key drivers, 4 key influencers



... continuous and disruptive changes are the new normal ...



谢谢
Thank You



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