

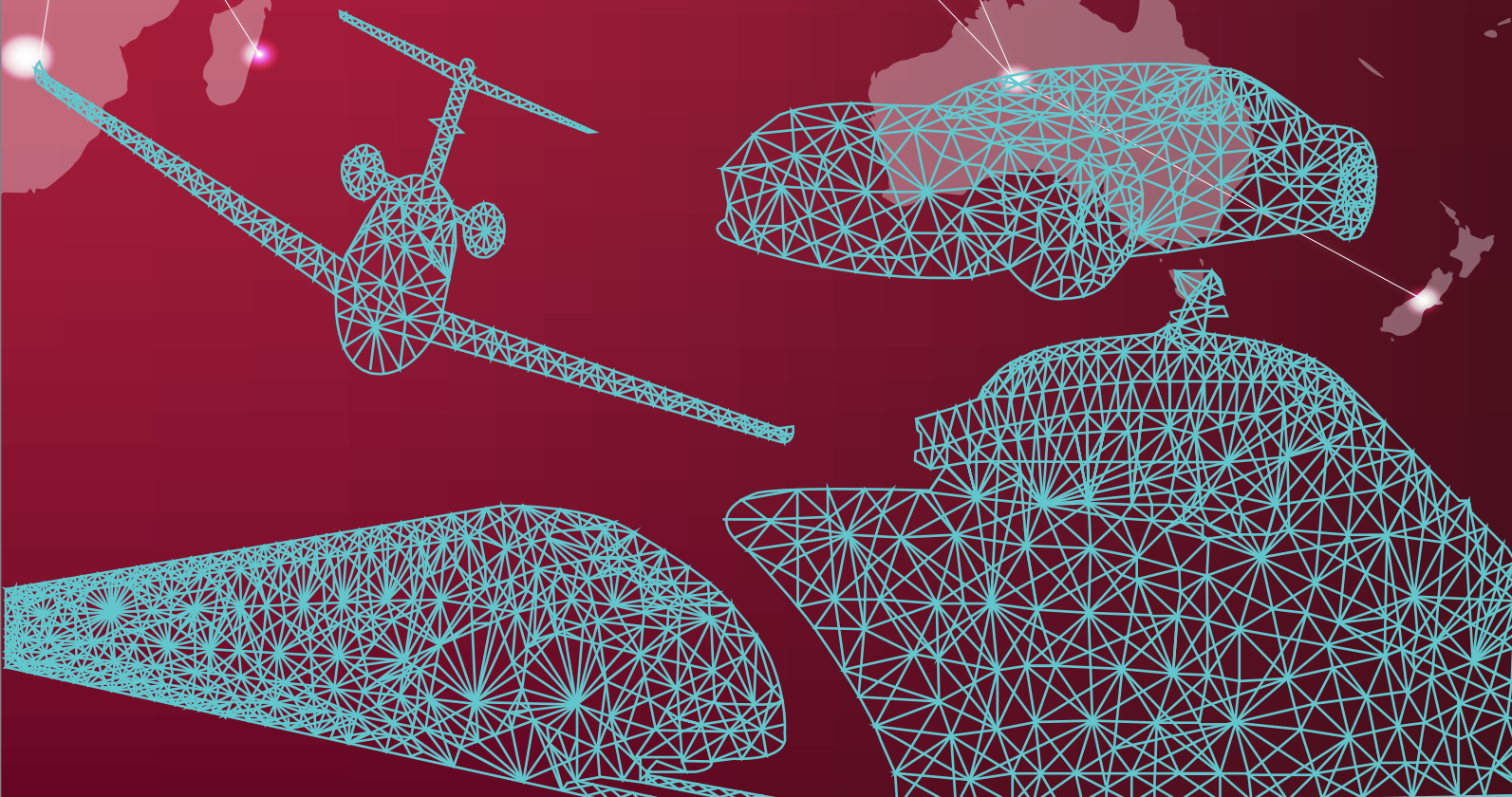


MINISTRY OF TRANSPORT
MALAYSIA



NATIONAL TRANSPORT POLICY

2019-2030



NATIONAL TRANSPORT POLICY 2019-2030



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I truly believe that a developed nation is not just about having a strong economy but also providing accessible and affordable transport services that will make real differences to people's lives. The NTP 2019-2030 sets out specific strategies to deliver an intelligent, connected, convenient and safe public transport system that meets the needs of the rakyat.

Foreword from
Prime Minister
**YAB TUN DR. MAHATHIR
BIN MOHAMAD**

Malaysia is widely known globally for its positive and stimulating economic growth in line with the aspiration of becoming a developed nation. However, we are currently at a critical juncture as the global landscape is evolving and adapting at an ever-growing pace and we must be equally adept at managing these changes.

The transport sector is the driver of our nation's growth and going forward the availability of a high-quality transport system is a fundamental building block towards becoming a developed nation. It is the Government's main intention to provide safe, reliable, affordable and sustainable transport services.

In line with this commitment, the National Transport Policy (NTP) 2019-2030 has been developed to lay the policy thrusts and strategies to enhance our economic competitiveness, provide strong social impact particularly with respect to inclusivity and accessibility, while reducing the negative impact of the transport system on the environment.

The NTP 2019-2030 provides an overarching policy to guide relevant federal ministries and agencies as well as State Governments and Local Authorities (PBT) to develop and streamline transport initiatives towards a common goal, resulting in effective and efficient use of resources.

For the private sector, this policy gives focus and direction by creating a conducive ecosystem to facilitate seamless movement of goods and passengers, and bring down the cost of doing business. We want to enhance the capabilities and

external readiness of Malaysian transport players to enable them to leap frog regionally and globally.

I truly believe that a developed nation is not just about having a strong economy but also providing accessible and affordable transport services that will make real differences to people's lives. The NTP 2019-2030 sets out specific strategies to deliver an intelligent, connected, convenient and safe public transport system that meets the needs of the rakyat.

The NTP 2019-2030 aims to take advantage of the rapid advancement in technology as well as embracing the upcoming Fourth Industrial Revolution (IR 4.0) to promote the modal shift from private vehicle to public transport. It also addresses people with disabilities and those living in the rural areas.

Through strategic planning, smart cooperation and commitment from all sides in implementing the NTP 2019-2030 I believe that Malaysia will be able to provide a sustainable transportation system that will drive economic growth and support the well-being of the rakyat.

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Foreword from Transport Minister **YB LOKE SIEW FOOK**

The transport sector is the backbone of growth in any country, enabling the efficient movement of passengers and goods across borders as well as to the final end-user. In Malaysia, the transport sector has grown by leaps and bounds, growing at over 5% since 2004 and contributing 3.5% to GDP.

We have developed strong institutions and organisations which have facilitated the growth of the economy. We have two ports ranked in the top 20 in the world in terms of container volume (Port Klang and Tanjung Pelepas) whilst KL International Airport is ranked 24th in the world in terms of total passengers handled. AirAsia is one of the world's leading low-cost carriers whilst Grab, now a key regional player in the e-hailing space, got its start in Malaysia.

Looking forward we can see the advent of new and potentially game-changing technologies such as ride-sharing platforms, e-commerce, the Internet of Things and autonomous vehicles. These new technologies are being introduced at an increasingly rapid pace and we can see governments around the world struggling to adapt to and balance the demands of both civil society as well as businesses.

We must encourage appropriate investment into areas such as infrastructure and improve our regulatory frameworks to position Malaysia not only as a regional distribution hub but also to ensure that the transport sector's growth is inclusive and accessible to all *rakyat*. Hence, the NTP 2019-2030 will be the single

governing framework to provide clarity to the private sector as the engine of growth as well as government agencies. It is formulated with five key policy thrusts, with specific strategies to address the needs of the *rakyat* including rural and disadvantaged groups, the geographical differences in Sabah and Sarawak and the industry.

NTP 2019-2030 would be able to propel the nation in its logistic endeavours with enhancements in road, rail, air and maritime sectors, and their interconnectivity to help Malaysia realise its target as a Regional Distribution Hub. NTP 2019-2030 would contribute to the nation's economy and ensure that Malaysia remains not just business-friendly but able to position ourselves as a global leader in the industry.

Foreword from
Secretary General
Ministry of Transport
**YBHG DATUK MOHD
KHAIRUL ADIB BIN
ABDUL RAHMAN**



The NTP 2019-2030 was developed with the aim of providing strategic direction and acts as a reference point for ministries and agencies for planning towards developing an efficient, integrated and sustainable transport system.

The Ministry of Transport (MOT) has collaborated with various members of government, academia and private sector through a series of focus group discussions, technical meetings and workshops since September 2016, to produce this document. I applaud the involvement of our counterparts from other ministries and the transport industry that allow MOT to get to this juncture.

The NTP 2019-2030 vision is anchored on the principle of sustainable transport. It allows consolidation and streamlining of initiatives towards a common goal thus contributing towards efficient use of resources, as well as addressing bottlenecks that hamper the growth in transport sector. The NTP 2019-2030 consists of five policy thrusts and 23 strategies taking into consideration future trends that will affect the transport sector. In line with the present focus towards the environment, a specific thrust has been formulated in the document that not only ensures that environmental aspects are addressed, but it will also contribute positively towards safety. More efficient services will not only enhance profitability to operators, but will also increase users' affordability.

The success of implementing the NTP 2019-2030 rests on support, commitment and dedication of all stakeholders. I am confident that with the cooperation of all parties, we will be able to overcome challenges of the transport sector successfully.





EXECUTIVE SUMMARY



Since its independence in 1957, Malaysia has experienced rapid growth from a rural, agrarian state to a modern, industrialised nation. This is evidenced by key indicators such as GDP growth, trade and per capita income, all of which have seen dramatic improvements. Despite the challenges brought about by global events such as the 2008 global economic crisis Malaysia remains firmly on track to realise its dream of becoming a high income nation.

Malaysia's growth has been underpinned by its transport sector. Malaysia has constructed over 200,000 km of roads, over 2,900 km of rail as well as 18 ports and 22 airports which form the backbone of Malaysia's growth as a key player in the South East Asian and global markets.

As the nation continues to develop, it is critical to ensure that it has an overarching transport policy that can support our ambitions to be a high-income nation by 2025 based on its strong and sustainable growth.

The National Transport Policy (NTP) was developed through close collaboration between the government and private sector. Since September 2016, over 150 members from the government, academia and representatives of the private sector convened in a series of workshops, focus group discussions and meetings.

The NTP was developed with the following objectives:

1. Create a conducive ecosystem for the transport industry to enhance productivity and competitiveness
2. Facilitate seamless movement of goods to boost trading activities and ease of doing business
3. Provide mobility that meets the expectations of people and promotes inclusivity
4. Increase modal share for public transport
5. Deliver an intelligent, safe and secure transport system
6. Ensure efficient and sustainable use of resources and minimise environmental pollution

MALAYSIA HAS CONSTRUCTED OVER

200,000 KM
ROADS

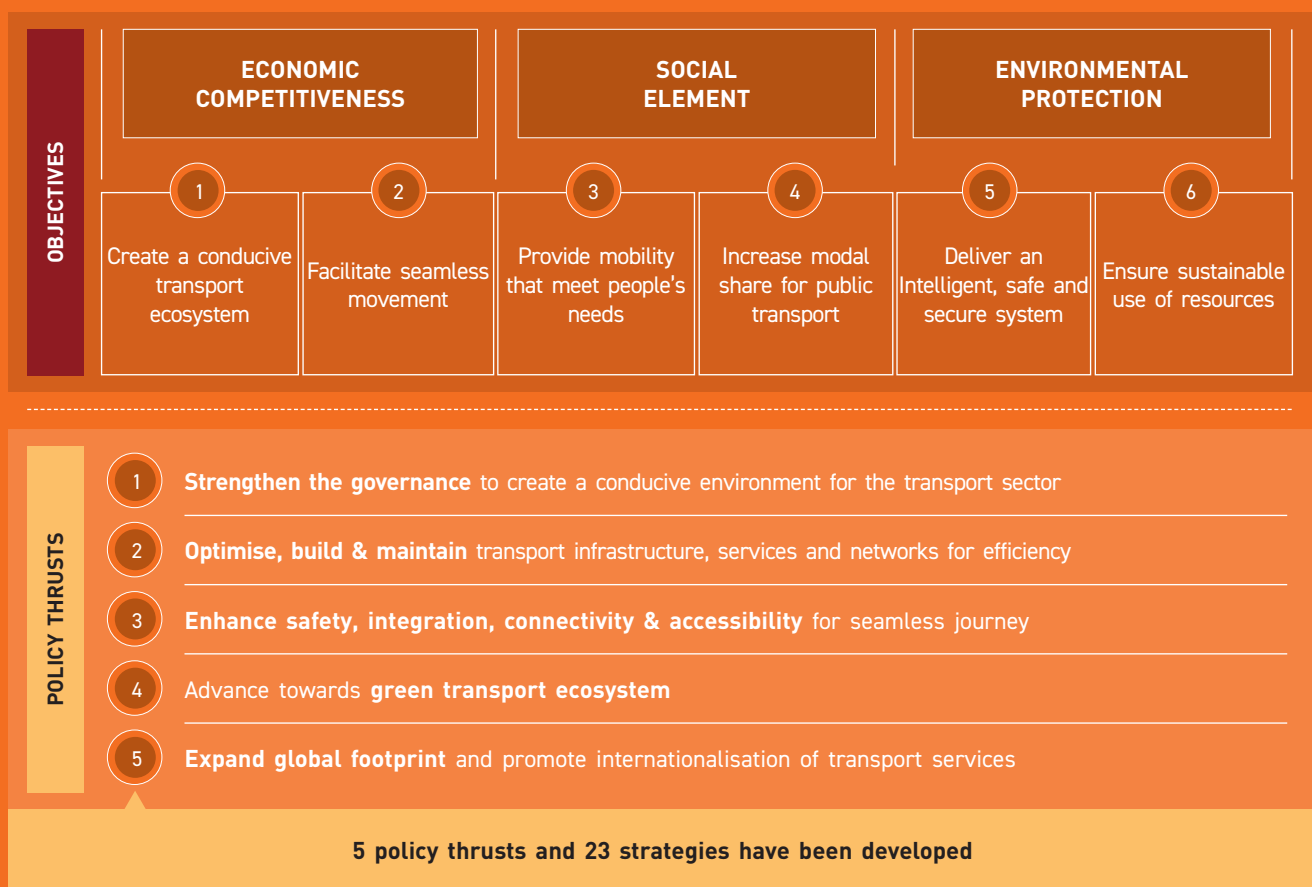
2,900 KM
RAILS

18
PORTS

22
AIRPORTS

THE VISION OF THE NTP 2019-2030 IS ANCHORED ON THE PRINCIPLES OF SUSTAINABLE TRANSPORT

To develop a sustainable transport sector that accelerates economic growth and supports the well-being of the *rakyat* in line with an advanced nation status

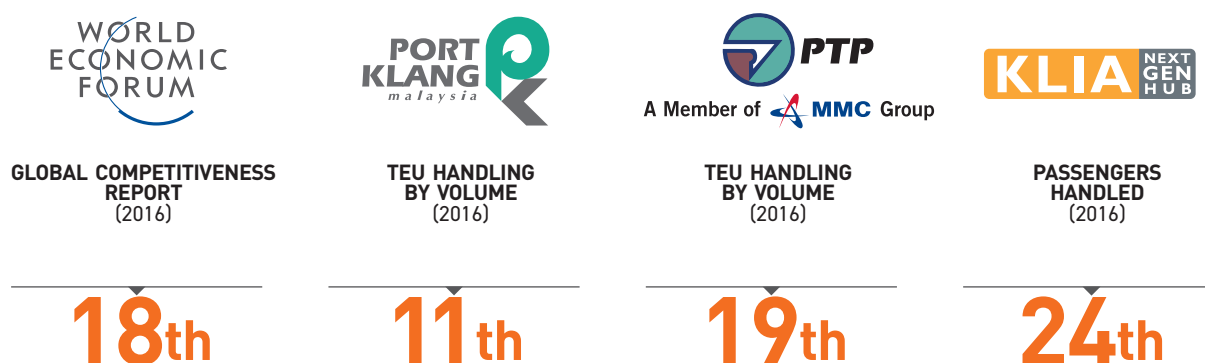


The timeline for the transport policy will span from 2019 till 2030. This coincides with Agenda on Sustainable Development 2030.

Malaysia's transport sector represents a critical enabler for its socio-economic development. The efficiency of a nation's transportation system directly correlates to trade and economic growth. In 2017, the transportation and storage subsector contributed 3.6% to GDP with a value of RM48.8 billion, and 6.6% to the services sector value-added. This subsector grew at an average rate of 5.6% per annum between 2005-2017 and is projected to grow at 8.9% or more going forward.

Malaysia has continuously built and upgraded its transport network by developing the road and rail arteries to support the mobility of people and goods. World class ports and airports such as KLIA and Port Klang have been built to support business and trade activities. Malaysia occupies a vital position along the Straits of Malacca, one of the most important shipping lanes in the world linking major Asian economies such as India, Indonesia, Malaysia, Singapore, China, Japan, Taiwan and South Korea. It is estimated that close to 100,000 vessels pass through the strait each year making it the busiest strait in the world, carrying an estimated 25% of the world's traded goods.

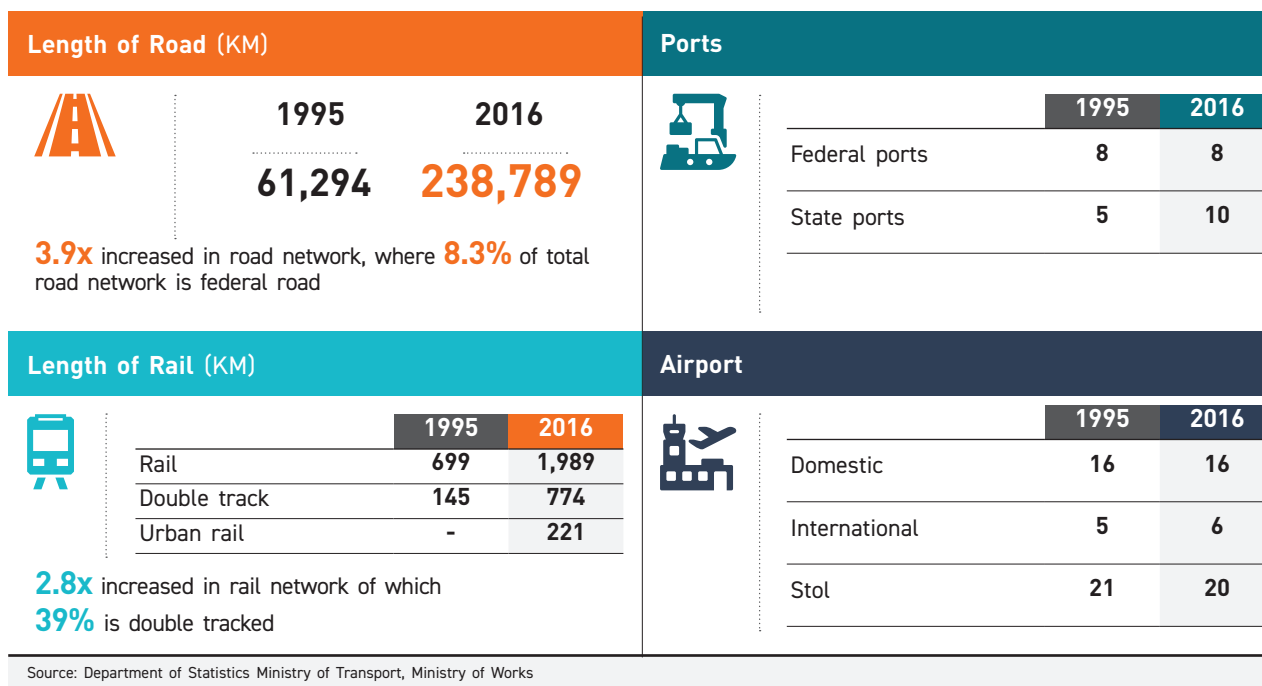
In addition, Malaysia's geographical position and strength in infrastructure make it a natural gateway to South East Asia. In 2016, Malaysia is ranked 18th out of 140 countries in the World Economic Forum's Global Competitiveness Report, the highest of all developing economies in Asia. Similarly, Port Klang ranked 11th in the world in terms of TEU handling in 2016 whereas PTP is ranked 19th whilst KLIA ranked 24th in the world in 2016 in terms of total passenger handled, with 52.6 million passengers.



* TEU - twenty foot equivalent units

FIGURE 1: THE CURRENT STATUS OF TRANSPORT INFRASTRUCTURE

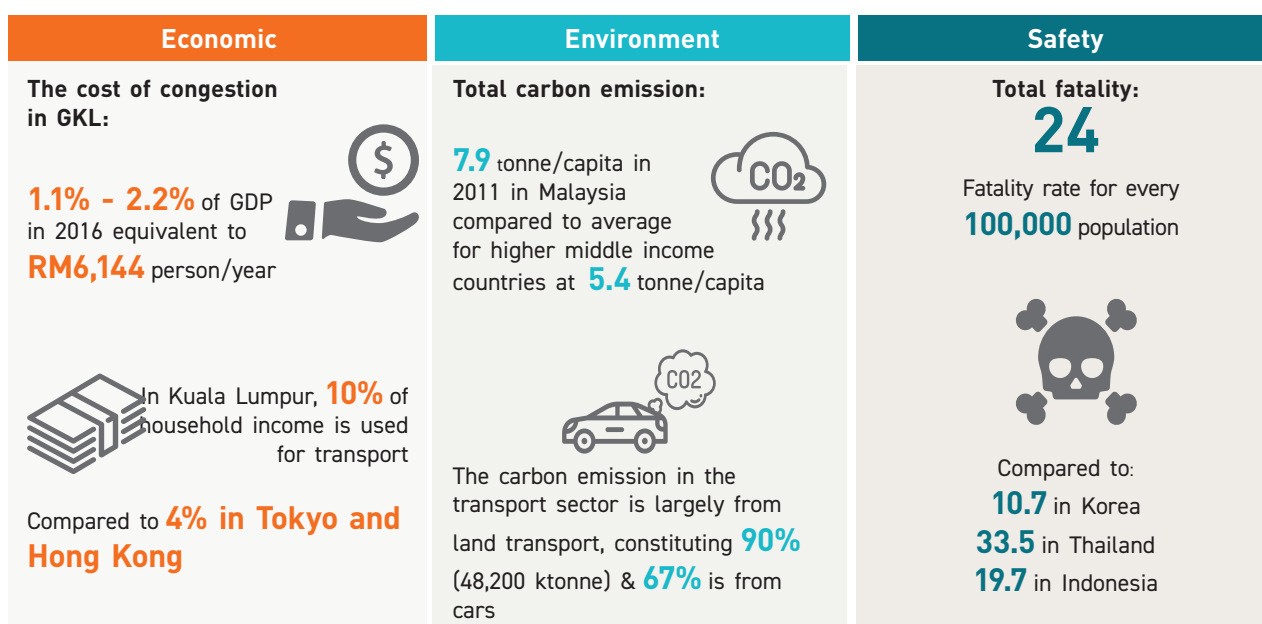
**Malaysia transport infrastructure & facilities
has continued to be developed over the years**



However, the rapid growth in mobility over the years will continue to increase in the future and if left unchecked, will lead to massive economic losses in productivity and pollution as shown in Figure 2.

FIGURE 2: MOBILITY TRENDS AND IMPLICATIONS

Increasing mobility trends will lead to increased congestion and pollution

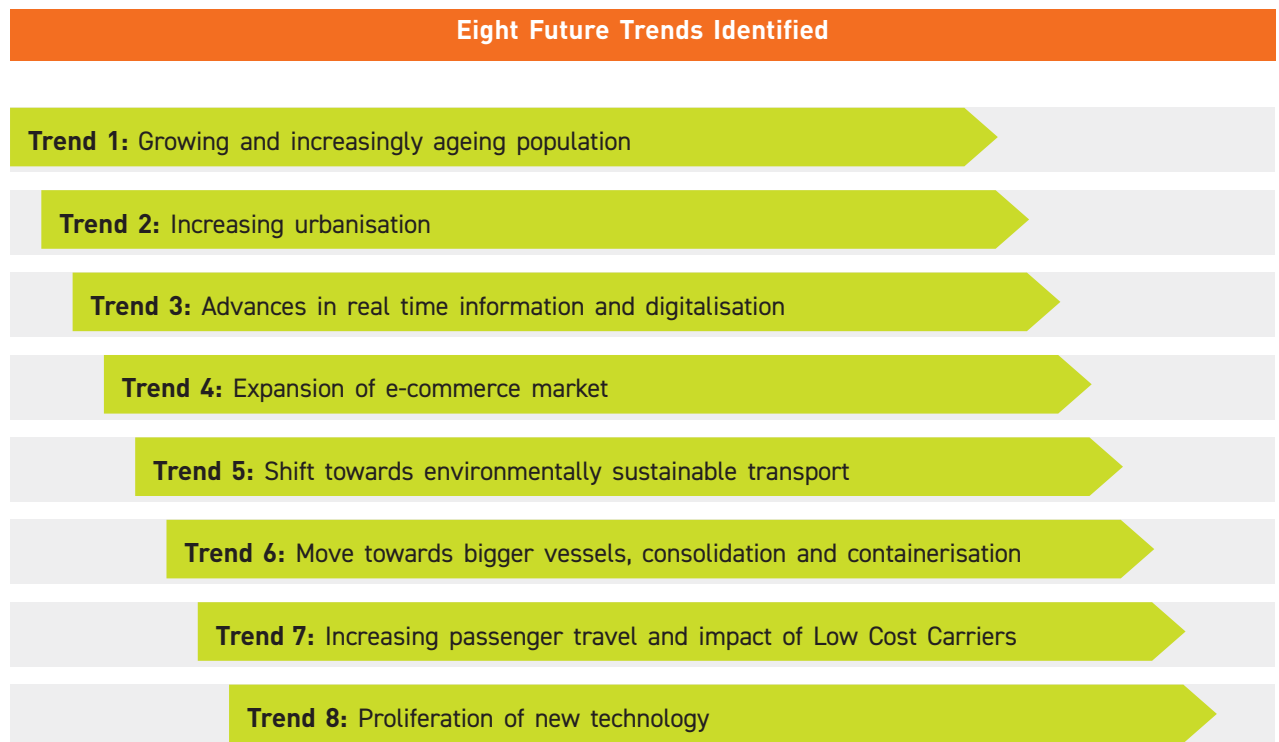


Source: Ministry of Economic Affairs, Ministry of Transport

Given the rapid growth in the transport sector over the last 10-20 years as well as Malaysia's position as a transport hub for Southeast Asia region, there is a need for an overarching national transport policy roadmap to:

- Provide strategic direction and act as a reference point for ministries and agencies for planning towards developing an efficient, integrated and sustainable transport system;
- Consolidate and streamline initiatives and efforts towards common objectives and goals, contributing to efficient use of resources; and
- Address the bottlenecks that hamper the growth of the transport sector, stimulate domestic growth and create regional footprint.

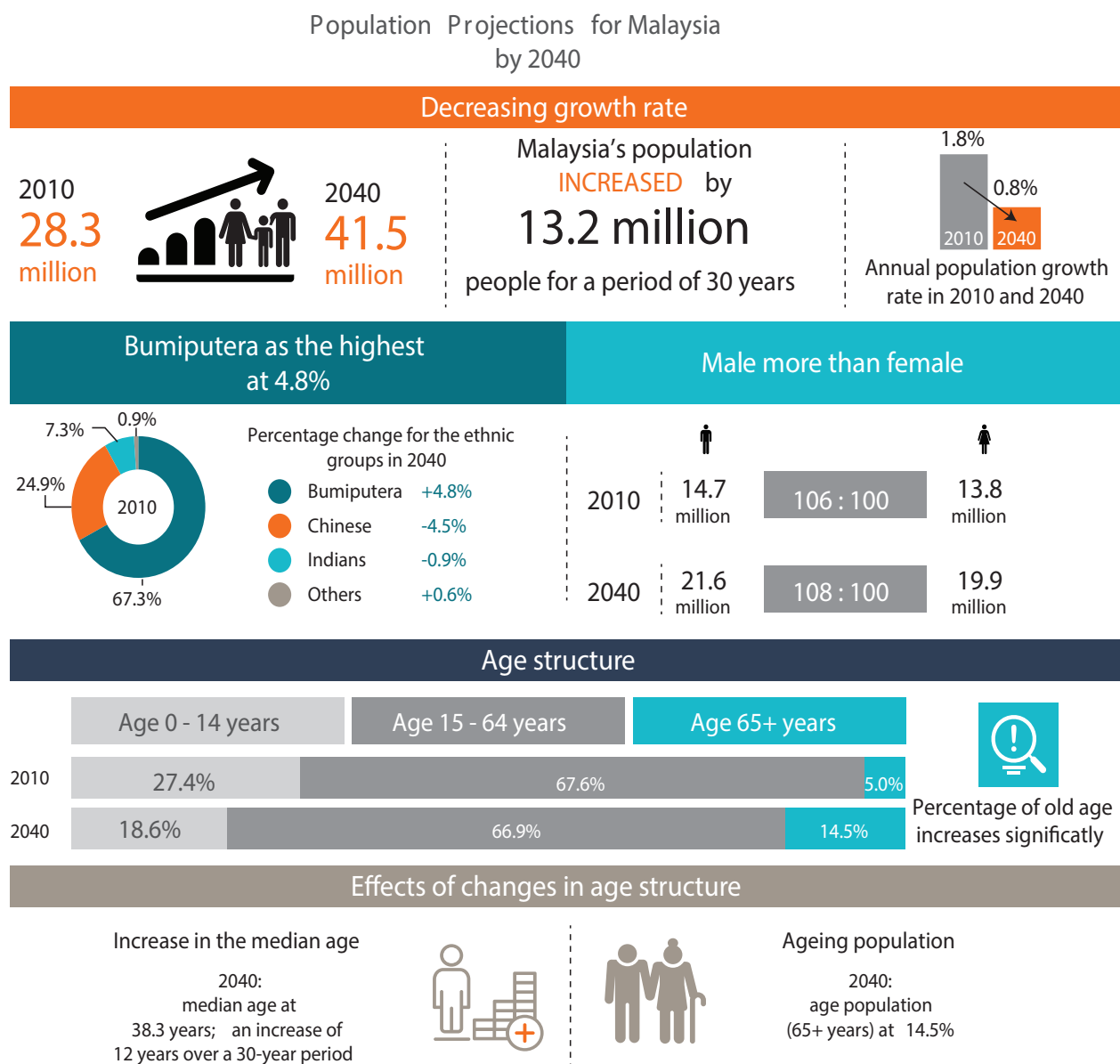
Eight key trends were identified for the policy to address:



Trend 1: A growing and increasingly ageing population

The population of Malaysia grew from 28.3 million in 2010 to 31.7 million in 2016 and is estimated to reach 41.5 million by 2040. Coupled with increasing affluence and mobility trends, it is estimated that Malaysians will make an estimated 131 million daily trips in 2030, a significant increase from the 40 million trips in 2010.

FIGURE 3: PROJECTED POPULATION FOR MALAYSIA

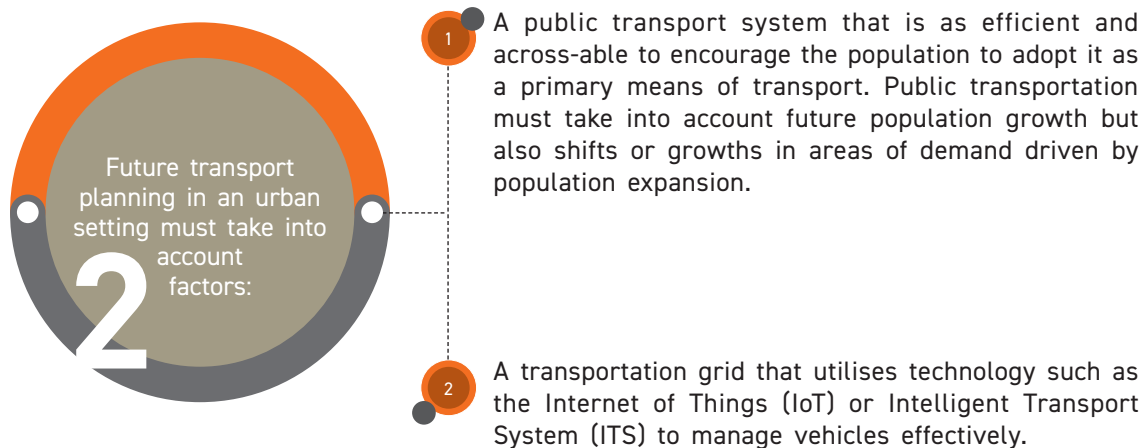


Source: Department of Statistics Malaysia

From a demographic standpoint the population aged 65 years and above is expected to be 7% in 2020 and this value will increase to 9% by 2030. Demographic trends indicate that Malaysia faces an increase in life expectancy, coupled with a gradually decreasing fertility rate, indicative of an aging population. This demographic trend, coupled with a significant increase in number of trips, will require rethinking of current transport strategies to ensure transportation is both accessible and sustainable.

Trend 2: Increasing urbanisation

Globally, urbanisation is on the rise and this is reflected in Malaysia's cities, with urbanisation growing rapidly from 51% in 1985 to 71% in 2010 and projected to reach 80% in 2030. Migration to cities is driven largely by job opportunities and increased standard of living. This trend places additional demands on sustainable urban development – to facilitate the development of necessary infrastructure and facilities whilst at the same time ensuring that the use of carbon resources is within the limits of sustainability.



Within the context of cities, transport has a key role in ensuring the efficient operation of economic activities by providing access to these activities as well as contributing towards social well-being. The city not only needs to manage intra- and intercity mobility but also the movement of goods and cargo.

The Nielsen Global Survey of Automotive Demand conducted in 2014 indicated that ownership of cars in Malaysia was amongst the highest in the world. Best practises from developed cities has indicated that infrastructure development to accommodate increasing private vehicle ownership leads to an unsustainable spiral.



Trend 3: Advances in real time information and digitalisation

Advances in mobile and information technologies are having a profound impact on travel choices. The proliferation of Global Positioning System (GPS) has allowed individuals to access to real-time traffic conditions and transit schedule information, empowering them to set and change travel schedules and routes. This pattern is expected to continue and intensify in the future.

User-centered mobility is an upcoming trend where travellers will have access to even more data and options, allowing them more control over preferences and methods of transport. Through smart phones, travellers will have access to more travel options and real-time status of all modes of transport. The digitalisation of payments has revolutionised both the ability to pay but also how users are charged for services. Charges will be based on time of day, road congestion, speed, occupancy and even fuel efficiency and carbon emissions, contributing to a more efficient traffic management.

Shared mobility services will become more common with the proliferation of car sharing and e-hailing platforms. This will have an impact on the usage of the entire transport network including both public and private transportation, impacting usage patterns as well as numbers and types of vehicle ownership.



Trend 4: Expansion of e-commerce market

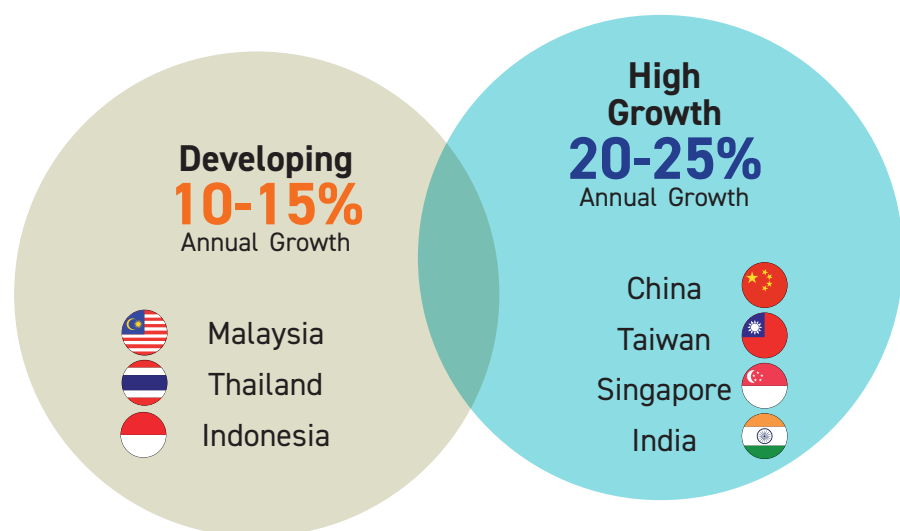
It is estimated that one in five trips taken by households in Malaysia is shopping related. The proliferation of e-commerce and online shopping platforms has the potential to replace a significant portion of these trips.

The e-commerce contribution to GDP recorded RM49 billion in 2012 and increased to RM68 billion in 2015. The upward trend is expected to continue, almost doubling in 2020 with RM114 billion under business as usual scenario, and expected to hit RM170 billion with right interventions. A study in 2016 suggests that Malaysia is at an inflection point of e-commerce growth with a projected annual growth rate of 11% which is indicative of significant potential for growth.

As online shopping captures a larger market share, it will reduce consumer travel associated with shopping trips, however commercial traffic will increase as a result. Growth in e-commerce will place increased demand for infrastructure and facilities to facilitate:

- Inter-state movement of goods from production centers (e.g. China) to consumers (e.g. Southeast Asia). Examples of these are modern ports, airports and potentially railways as well as associated means of transport such as ships, planes, rolling stock and potentially new technologies such as autonomous vehicles
- Intra-state movement of goods to localised distribution points. Examples of these are highways, railways as well as associated means of transport such as trucks and rolling stock
- Last mile delivery from distribution centers to consumers. Examples of these are vans, motorcycles and autonomous vehicles

**FIGURE 4:
EVOLUTION OF
E-COMMERCE**



As online shopping captures a larger market share, it will reduce consumer travel associated with shopping trips, however commercial traffic will increase as a result. Future planning must take into account this growth in commercial traffic – in particular last mile delivery into congested urban areas – as well as the proliferation of new technologies and business models such as autonomous deliveries and consolidated deliveries.

Trend 5: Shift towards environmentally sustainable transport

It is estimated that the world use of petroleum and other liquid fuels will increase from 95 million barrels per day (b/d) in 2015 to 104 million b/d in 2030 with the transport sector accounting for 60% of the increase (International Energy Outlook 2017). The transportation sector cannot continue to develop under a business-as-usual scenario because it implies a continued strong dependence on oil with a low share of renewable energy.

Cities have a role in leading the sustainable transport agenda and must drive transformational changes in transport. Measures must be taken to induce behavioral change to optimize mobility patterns and must be coupled with effective planning and technology design that are targeted to provide not only integrated transport but also an interactive one. Many cities around the world have successfully embraced sustainable mobility and offers best practices and lessons that we can learn from.

The demand for a green supply chain will become prominent as the environmental aspects gain importance in transportation sector. Similarly, efficiencies in the supply chain will allow companies to gain a competitive edge.

In 2015, transport accounted for approximately

45.2% Of energy demand consumed

nationally and within the transport sector,
land transport accounted for approximately

90% of usage



Sector	ktoe	%
Transport	22,435	45.2
Industry	13,989	27.0
Non-energy use	5,928	11.4
Commercial	4,449	8.6
Residential	3,110	6.0
Fishery	664	1.3
Agriculture	231	0.4

Source: Energy commission (2015)

Trend 6: Move towards bigger vessels, consolidation and containerisation

Since the adoption of containerisation, ship capacities have steadily increased, rising almost eightfold over the last 40 years and more than doubling since 2000. The latest ultra-large post-Panamax ships can carry over 20,000 TEU (twenty foot equivalent units) and have a draft of over 15 meters. This places greater demands on ports to invest in and deliver minimally required infrastructure and services to accommodate these vessels. The move towards bigger vessels poses a threat to ports, a risk that also applies to key ports in Malaysia such as Port Klang and Pelabuhan Tanjung Pelepas.

The trend towards growth in mega container ships, coupled with associated shipping lines poor earnings, have resulted in the formation of strategic alliances between carriers, which spreads the risk associated with new investments and better use of existing capacity. Three large alliances have been formed and has started operating since April 2017. Each of these alliances accounts for approximately a third of global shipping volume.

Another emerging trend is a further move towards containerisation. For example, the paper industry has adapted their cargo to the container shipping method by adjusting the size of paper rolls to fit the containers. It is also anticipated that in a decade, 90% of the general cargo segment such as steel, forest products as well as break bulk cargo such as malt and fertilisers will be put in containers.

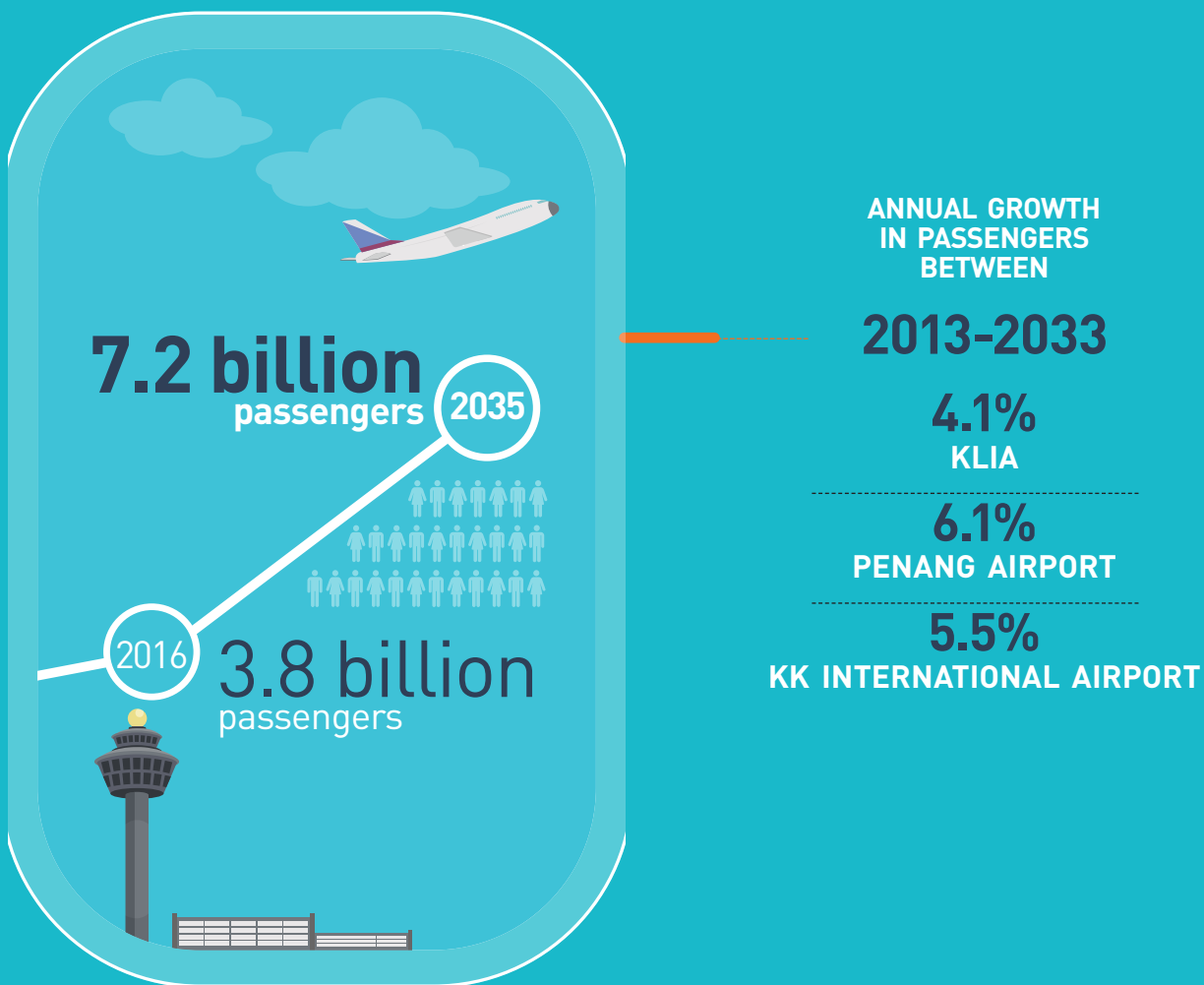
These trends indicate a shift towards larger, more centralised hubs. Smaller ports may lose many of their direct connections, and instead will only serve as the spokes in the hub and spoke system. Future policy planning must take into account the ability of a nation to compete as a regional freight hub with the necessary development of infrastructure, regulatory and service providers.



Trend 7: Increasing passenger travel and the impact of Low Cost Carriers

Demand for air travel over the next two decades is expected to double. The International Air Transport Association (IATA) expects 7.2 billion passengers to travel in 2035, a doubling of the 3.8 billion air travellers in 2016. The estimated CAGR is 3.7%. The National Transport Strategy Study by World Bank (2014) forecasts the annual growth of passengers of 4.1% between 2013-2033 in Kuala Lumpur International Airport, 6.1% in Penang Airport and 5.5% in Kota Kinabalu International Airport. Future planning needs to take into account future growth in passengers as well as in airfreight.

Air travel in the last decade has been shaped by the sharp growth in low cost carriers (LCCs), accounting for as much as 25% of global air travel according to estimates. Aside from their impact on passenger growth and mobility, LCCs have brought about fundamental changes in air travel such as focus on secondary airports, the adoption of point-to-point travel (as opposed to the traditional hub and spoke model) and increased automation in both sales and services (i.e. check in and boarding).



INTELLIGENT TRANSPORT INFRASTRUCTURE

The proliferation of new technology such as machine learning, cloud networking and the Internet of Things – where devices and sensory devices become increasingly networked and data is available in real-time as well as on a two-way basis – will require a complete rethink of the current transport regulatory and planning framework.

The availability of a variety of data – environmental, traffic flow, infrastructure health, user behaviours and so on – must also be accompanied with a policy framework built to take advantage of the availability of data to allow better governance in areas such as infrastructure planning and maintenance, traffic planning, asset maintenance, incident management, and traffic diversion.

AUTONOMOUS DRIVING

Increasing automation and recent advances in technology have led to the development of autonomous, or self-driving vehicles capable of independent operation without human supervision or intervention. Semi-autonomous cars featuring technology such as adaptive cruise control, automatic emergency braking, automated parking, and active lane control are already mainstream features in current vehicle models.

Autonomous driving is also expected to penetrate all aspects of the trucking industry, and self-driving trucks will dramatically change the business model of the industry. Similarly in shipping, autonomous cargo vessels are projected to be sailing in 2020. Fully autonomous cargo vessels offer benefits such as reduced crew requirements – leading to increased cargo space. Jobs will be reduced on vessels (overcomes the issue of insufficient seafarers), but instead created in the command and control centres on land.

Future policy planning account for autonomous vehicles from both a job creation and regulatory perspective. Job requirements will change, requiring highly specialised skillsets or even skill that have not yet been developed. Education and training policies must ensure that the future workforce is best equipped to address these demands.

The challenges of autonomous vehicles from a regulatory perspective are enormous. Future policies, regulations and laws must take into account issues such as security and safety, liability, connectivity and data privacy to name a few. This will require the cooperation of various parties from the Federal to State and local governments, research institutes, global organisations, civil society as well as the private sector.

NATIONAL TRANSPORT POLICY 2019-2030



4 MAIN SECTORS



5 POLICY THRUSTS

23 STRATEGIES



The transport policy is anchored on the principles of sustainable transport as encapsulated in its vision statement:

POLICY VISION

TO DEVELOP A SUSTAINABLE TRANSPORT SECTOR THAT ACCELERATES ECONOMIC GROWTH AND SUPPORTS THE WELL-BEING OF THE RAKYAT IN LINE WITH AN ADVANCED NATION STATUS

Three principles of the Vision

Economic competitiveness

- Ensuring seamless connectivity and movement as an enable for other economic activities
- Delivering reliable, efficient, affordable and high quality service
- Developing skilled human capital
- Nurturing global players in the transport sector

Social impact

- Ensuring inclusivity and accessibility of transport services
- Improving safety and security of transport services
- Involving public participation/ stakeholders engagement in the development of transport initiatives

Environmental impact

- Reducing fuel consumption and GHG emission/pollution control
- Promoting environmental protection and conservation
- Encouraging sustainable consumption and production

Since September 2016, over 150 members from the government, academia and representatives of the private sector were engaged through a series of focus group discussions, technical meetings and workshops. Input from key stakeholders was taken into account in developing strategies for each transport sector (air, land, sea and logistics) based on action plans and initiatives proposed during the workshop sessions and focus group discussions.

These strategies were then reviewed and grouped under five key policy thrusts. While policy thrusts and strategies will remain constant throughout the timeframe of the Policy (2019-2030), the various action items will be continuously refined and amended to adapt to changing conditions and addressing new challenges.

The National Transport Policy (NTP) 2019-2030 is aimed to achieve the following objectives:

- Create a conducive ecosystem for the transport industry to enhance productivity and competitiveness at local, regional and global levels
- Facilitate seamless movement of goods to boost trading activities that improves the ease of doing business
- Provide mobility that meets the needs of the *rakyat* and promotes inclusivity
- Increase modal share for public transport
- Deliver an intelligent, safe and secure transport system
- Ensure efficient and sustainable use of resources and minimise environmental pollution



THE NTP 2019-2030 WILL PROVIDE THE STRATEGIC DIRECTION FOR A SUSTAINABLE TRANSPORT SECTOR

A National Transport Policy is important for the following purpose:

Provide strategic direction to ministries/
agencies to plan & develop the transport
sector



Streamline initiatives and programs towards
common objectives and goals



Ensure efficient and effective use of resources



Act as a common platform so that sectoral
plans complement each other



5 Policy Thrusts and 23 Strategies

Policy Thrust 1: Strengthen governance to create a conducive environment for the transport sector

- S1.1:** Strengthen coordination among agencies and industry players
- S1.2:** Enhance skills development in the transport sector and make the sector an attractive career option
- S1.3:** Strengthen and streamline the regulatory framework
- S1.4:** Embed a robust evidence-based assessment in planning and development of transport sector to meet the market demands
- S1.5:** Improve efficiency of clearance process by agencies for logistics

Policy Thrust 2: Optimise, build and maintain the use of transport infrastructure, services and networks to maximise efficiency

- S2.1:** Implement smarter and more efficient use of existing infrastructure and in developing new infrastructure
- S2.2:** Increase the utilisation of rail service for passengers and goods
- S2.3:** Upgrade hinterland connectivity to gateways and connect corridors for improved economic distribution
- S2.4:** Reinforce the maintenance regime of transport infrastructure
- S2.5:** Enhance competitiveness in air cargo operation to support Malaysia in becoming a regional distribution centre
- S2.6:** Modernise integrated logistics to reduce the cost of doing business

Policy Thrust 3: Enhance safety, integration, connectivity and accessibility for seamless journey for passenger and goods

- S3.1:** Strengthen enforcement to ensure adherence to rules and regulations to improve safety, service quality and reliability
- S3.2:** Adopt a safe system approach that advocates safer road, rail, maritime and aviation users, infrastructure and vehicles
- S3.3:** Ensure that Malaysia's transport sector's safety and security are in accordance to international standards
- S3.4:** Strengthen transport infrastructure and intensify the use of digitalisation to enhance connectivity

Policy Thrust 4: Advance towards a green transport ecosystem

- S4.1:** Enforce compliance to acts/regulations and shift towards international environmental standards
- S4.2:** Prioritise public transport network as fundamental structure in charting out sustainable spatial and transportation growth in urbanised areas
- S4.3:** Accelerate implementation of low carbon mobility initiatives
- S4.4:** Institute measures to control pollution, noise and waste from the transport sector
- S4.5:** Develop effective communication, education and public awareness (CEPA) to create behavioural change towards practices of sustainable transport

Policy Thrust 5: Expand global footprint and promote internationalisation of transport services

- S5.1:** Create an environment that facilitates local transport industry operators to become regional or global players
- S5.2:** Facilitate regional cooperation and agreements that improve the transport industry
- S5.3:** Ensure transport-related agencies are sufficiently equipped to support drive in improving Malaysia's ranking in global competitiveness indices



**POLICY
THRUST**

**STRENGTHEN
GOVERNANCE
TO CREATE A
CONDUCTIVE
ENVIRONMENT FOR
THE TRANSPORT
SECTOR**

5 strategies and 33 action items have been identified

5 STRATEGIES



Strengthen coordination among agencies & industry players



Enhance skills development & elevate career path



Strengthen & streamline the regulatory framework



Embed evidence based assessment in planning and development



Improve efficiency of clearance process by agencies for logistics

KEY ACTION ITEMS

- Strengthen coordination between **Federal and State** through National Transport Council
- Strengthen **LPKP as a dedicated land transport authority** for Sabah and Sarawak
- Strategically coordinate all **transport safety under a single entity**

- **Establish Centre of Excellence** for transport at existing higher learning institutions
- **Develop SMEs** in transport in related agencies
- Develop **technical expertise** in transport industry

- Prepare framework for regulation to **support the arrival of future technology** for all transport modes
- Establish **incentive and penalty framework** to ensure reliability and good quality of service

- Create a **centralised transport database and modelling**
- Strengthen **Big Data capabilities** at MoT, other transport agencies and local authorities
- **Enhance research collaboration** -government, NGOs, university & industry

- **Streamline non-tariff measures** for export, transshipment and imports of goods across borders
- **Differentiate and simplify customs procedures** for transshipment and ordinary cargo
- Simplify processes and procedures to **encourage multimodal freight movement**



THE introduction of new and disruptive technologies coupled with increasingly short design-to-rollout phases requires institutions and governance that is both sufficiently robust and adaptable to support an efficient and integrated transport service. The institutional frameworks need to be strong and sound to create a healthy and conducive ecosystem for industry players to operate efficiently in a competitive environment, and to deliver a safe and comfortable transport services to users. At the same time they need to be sufficiently adaptable to account for the influx of new technologies and trends.

This policy thrust seeks to strengthen existing institutional framework which among others include roles and functions of agencies, regulations, standards and acts, coordination mechanisms, planning matters, capacity building, funding and financing, data gathering and analysis as well as behavioural and mindset change.



OBJECTIVES

- Review and update rules, act & regulations with the aim of creating a robust and adaptable regulatory framework that is able to cater for current and future needs of the transport sector
- Establish a centralised database to allow better and more evidence based planning
- Clearly align the roles and functions of state and federal in the transport sector
- Promote and strengthen research, development and innovation in the transport sector
- Build local human capital development by addressing capacity building and training gaps to support an efficient and integrated transport service

THIS THRUST WILL ADDRESS THE FOLLOWING ISSUES:

- The need to review, update or remove outdated/archaic rules, acts and regulations
- Poor readiness of regulatory framework to embrace changes especially new technology
- Inadequate transport data to help in planning and developing the transport sector
- Insufficient analytics and intelligence in the transport industry
- Coordination issues among transport related agencies
- Absence of a centralised analytics database/modelling/ for evidence based planning, including developing geospatial data
- Inadequate research and development and Innovation (R&D&I) in the transport sector
- Inadequate skilled workers to fill skill gaps
- Unattractive career path in the transport sector especially land transport
- Insufficient enforcement leading to overloading and other traffic offences

MEASURE OF SUCCESS:

- Improved standing in global rankings (e.g. Logistics Performance Index, World Competitiveness Index)
- Improved ease of doing business rating



STRENGTHEN COORDINATION AMONG AGENCIES AND INDUSTRY PLAYERS

Despite various efforts undertaken to reform the transport sector, there remain challenges in coordination and planning that hamper the delivery of an efficient transport service. Policies and plans formulated at federal level need to cascade down more effectively for implementation to the state and local authorities.

Objectives:

- Strengthen the governance of the transport sector
- Optimise use of resources and facilitate decisions for the right interventions
- Improve sector-level planning and policy making

▶ Action Items:

1. Spearhead the national transportation sector towards achieving high-income nation
2. Align the roles of State government and local councils with MOT
3. Undertake a comprehensive review of current governance structure of management of inland and coastal waterways
4. Ensure active involvement of state/local government, industry players and public as an integral part of public transport planning and development
5. Strengthen LPKP (*Lembaga Perlesenan Kenderaan Perdagangan*) as a dedicated land transport authority for Sabah and Sarawak
6. Strategically coordinate all transport safety under a single entity



STRATEGY 1.2

ENHANCE SKILLS DEVELOPMENT IN THE TRANSPORT SECTOR AND MAKE THE SECTOR AN ATTRACTIVE CAREER OPTION

The transport industry's rapid evolution places a premium on both specialised skillsets and ability to adapt to new technologies, in some cases future demands are for skillsets which have yet to be developed. The education and skills development industries need to minimise the risk of our transport operators not being sufficiently equipped with adequate knowledge to understand and operate new technology and equipment to its optimum capacity. In addition, there is insufficient expertise in the agencies involved in transport planning and development to enable them to carry their roles and functions effectively.

Objectives:

- Ensure sufficient capacity and capability for strategic planning and implementation of transport programs and projects
- Create a transport industry that is conducive to attract newcomers and increase the number of local skilled manpower in the transport sector
- Increase the productivity of the transport workforce
- Cater the needs of the transport industry by providing sufficient qualified and skilled personnel to cope with the current and future trends such as digitalisation and autonomous vehicles
- Prepare human capital to cater to future technologies (e.g. ITS and autonomous vehicles)



► Action Items:

1. Establish Centre of Excellence (CoE) agency for transport sector to cater for transport training programmes and R&D
2. Establish Transport Centre of Excellence (CoE) at existing learning institutions to cater for transport related programmes and R&D
3. Strengthen the capability and expertise of transport industry
4. Ensure respective transport agencies develop relevant training, upskilling and competencies through training schemes, qualification courses and certification
5. Develop a programme in management and operation of airports, railways, ports and lands transports to improve the quality and efficiency of transport service sector
6. Enhance public awareness on career in transportation as an attractive choice which offers a wide range of job and business opportunities

STRENGTHEN AND STREAMLINE THE REGULATORY FRAMEWORK

With the transport industry rapidly changing, some of the current regulations and guidelines are not updated to meet current demand and future trends. In addition, the current regulatory framework needs to be prepared to embrace new technologies and disruptive business models to ensure the development of the transport sector copes with the current trend.

In addition, the current regulatory framework needs to be prepared to embrace new technologies and disruptive business models to ensure the development of the transport sector copes with the current trend.

Objectives:

- Review current regulatory framework and guidelines to ensure that they are still relevant and adaptable to current and future demands
- Ensure that future regulatory framework that governs transportation is robust and able to adapt quickly to accommodate new technologies and trends

▶ Action Items:

1. Promote and facilitate transparent, free and competitive market principles
2. Strengthen public private partnerships (PPP) and performance-based contracts
3. Establish incentive and penalty framework for public transport services operator to ensure reliability and good quality of service
4. Push for smarter regulations for e-commerce to increase the efficiency and ease of doing business
5. Prepare framework for identification, prioritisation, adoption and regulation to support the arrival of future technology for all transport modes

EMBED A ROBUST EVIDENCE-BASED ASSESSMENT IN PLANNING AND DEVELOPMENT OF TRANSPORT SECTOR TO MEET THE MARKET DEMANDS

Current and future trends point towards new and potentially game-changing technologies being introduced at an increasingly fast rate. To allow for sufficient and quality research and modelling, there is a need for a regularly updated data and centralised database that is accessible by all transport-related agencies. In addition, there is a clear demand for additional analytical capabilities within transport agencies to perform analysis for strategic and data-driven planning.

Provide a common database that can be used as a reference point by respective agencies for evidence-based planning

Objectives:

- Institutionalise evidence-based policy making and planning
- Strengthen economic analysis for informed decision making
- Provide a common database that can be used as a reference point by respective agencies for evidence-based planning
- Establish real-time transport data collection for planning and public use

► Action Items:

1. Create a centralised transport database, geo-spatial data and modelling to support evidence based and strategic planning by government agencies
2. Establish a centralised, commonly accessible database to allow more and better analytics, monitoring and evaluation
3. Strengthen Big Data capabilities at MoT, other transport agencies and local authorities.
4. Develop an integrated and market driven aviation expansion plan.
5. Enhance collaboration among government agencies, universities and industries to leverage on research work.

STRATEGY 1.5

IMPROVE EFFICIENCY OF CLEARANCE PROCESS BY AGENCIES FOR LOGISTICS

The current cargo clearance process can be complex and complicated involving numerous rules and regulations required by multiple border management agencies. This can divert the energies of importers and exporters away in addressing cargo clearance process. Time taken for the import and export processes has to be improved to be able to stand at par with other advanced countries.

To shorten the clearance time and reduce steps needed for cargo clearance to attract importers and exporters

Objectives:

- Shorten the clearance time and reduce steps needed for cargo clearance to attract importers and exporters
- Boost trade activities and stand at par with other advanced countries in terms of efficiency in cargo clearance

► Action Items:

1. Streamline non-tariff measures for export, transshipment and imports of goods across borders and differentiate the customs procedure for transshipment and normal cargo
2. Simplify processes and procedures to encourage multimodal freight movement



POLICY
THRUST

2

OPTIMISE,
BUILD AND
MAINTAIN THE
USE OF
TRANSPORT
INFRASTRUCTURE,
SERVICES AND NETWORKS
TO MAXIMISE EFFICIENCY

6 strategies and 30 action items have been identified

6 STRATEGIES



Implement smarter and more efficient use of existing infrastructure and in developing new infrastructure



Increase the utilisation of rail service for passengers and goods



Upgrade hinterland connectivity to gateways & connect corridors for economic distribution



Reinforce maintenance regime of transport infrastructure



Enhance competitiveness in air cargo operation



Modernise integrated logistics to reduce cost of doing business

KEY ACTION ITEMS

- Adoption of **technology and digitisation** in transport
- **Integrate** transport infrastructure development with land use planning
- Optimise selected ports to encourage **cruise tourism**

- Enable **multi-rail operator**
- Upgrade rail facilities to and within ports to **ease freight movement**
- Enhance road-rail-port **connectivity**

- **Integrate rail and road links** to airport, port & industrial areas

- Implement **preventive maintenance**
- Enforce **performance based contract**
- Adopt **best practices** for all transport infrastructure maintenance

- **Facilitate** growth of Digital Free Trade Zone
- Position main airports as **regional distribution centres**
- Facilitate handling transshipment cargo **using multi-modal mode of transport**

- Encourage the development of **urban logistics distribution**



THIS policy thrust seeks to prioritise the optimisation of existing infrastructure/ services in terms of usage to increase productivity and reduce wastages. This can be achieved through use of digitalisation/technology to effectively manage demand. Plans to build/introduce new infrastructure, services and connectivity must be based on demand (understanding customer behaviour) and assessed thoroughly to determine actual need and feasibility. Effective maintenance must be given importance to improve performance and safety. This thrust also seeks to introduce and promote connectivity and linkages through digital network (Internet of Things, IT systems). Liberalisation of niche transport areas where gaps exist for Malaysian's to offer/fulfil such services, could be considered. This thrust caters to the economic principle of sustainable transport.



OBJECTIVES

- Improve the economic contribution by the transport sector
- Increase the efficiency and productivity of the transport sector



THIS THRUST WILL ADDRESS THE FOLLOWING ISSUES:

- The arrival of disruptive technology especially autonomous vehicles and our readiness to cater and adapt to this trend
- Poor maintenance of existing transport infrastructure and assets – particularly road and rail maintenance
- Transport facilities which are under-utilised, in particular rail, and those which has exceeded capacity
- Higher cost of doing business in logistics services



MEASURE OF SUCCESS:

GDP contribution by transport services

STRATEGY 2.1

IMPLEMENT SMARTER AND MORE EFFICIENT USE OF EXISTING INFRASTRUCTURE AND IN DEVELOPING NEW INFRASTRUCTURE

Evidence indicates that there is potential to significantly optimise utilisation of existing transport infrastructure, particularly with ports, airports, railway stations as well as park and ride facilities. Additional utilisation of technology has the potential to address some of the issues faced as well as providing sufficient data to allow more accurate mapping of future demand to allow optimal infrastructure build out.

Optimise existing infrastructure and assets through adoption of technology and digitalisation in transport, e.g. accelerate usage of automation and digitalisation to increase efficiency of port and vessel operation

Objectives:

- Optimise resources, reduce wastages and increase productivity in existing transport infrastructure
- Develop Internet of Things (IOT) in transport sector by adopting automation/digitalisation
- Improve consumer experience in public transport

► Action Items:

1. Optimise existing infrastructure and assets, as well as accelerate usage of automation through adoption of technology and digitalisation in transport
2. Integrate transport infrastructure development with land use planning and prioritising public transport connectivity
3. Optimise facilities at selected ports to increase opportunities and engagement for cruise tourism by private local and international cruise operators

INCREASE THE UTILISATION OF RAIL SERVICE FOR PASSENGERS AND GOODS

The current movement of goods by rail is only 30% of total railway track capacity, and less than 5% of land freight is transported by rail. Therefore, there is untapped potential for using rail to transport goods, especially for dangerous and hazardous materials. Globally, rail transportation of hazardous materials is recognised to be the safest method of moving large quantities of chemicals over long distances. Similarly, there is additional capacity on the existing KTM Komuter and intercity rail services which have the potential to be utilised.

Enhance road-rail intermodal connectivity to promote modal shift from road to rail

Objectives:

- Encourage modal shift of freight from road to rail
- Optimise the use of existing rail infrastructure and assets
- Reduce greenhouse gas emission and road congestion
- Reduce number of heavy vehicles on roads

► Action Items:

1. Progressive liberalisation of rail services to enable multi-operator environment
2. Upgrade rail facilities to and within ports to ease freight movement
3. Streamline transport rules and processes such as custom clearance to improve utilisation of rail
4. Enhancing road-rail intermodal connectivity to promote modal shift from road to rail

STRATEGY 2.3

UPGRADE HINTERLAND CONNECTIVITY TO GATEWAYS AND CONNECT CORRIDORS FOR IMPROVED ECONOMIC DISTRIBUTION

Hinterland connectivity of seaports and airports is often cited as a key concern in moving cargo, leading to increased costs and delays in movement of goods. Some of the challenges include the imbalanced modal split which is highly dependent on road, traffic congestion and limitations in inland facilities (such as warehouses and depots). In addition, development in economic corridors requires additional coordination and alignment amongst agencies to ensure optimal development of infrastructure and services.

Improve road development for better connectivity between urban and rural areas as well as within rural areas

Objectives:

- Create domestic volume for cargo and boost trading activities
- Reduce the bottleneck and ease the movement of cargo to seaport and airport
- Establish a seamless and efficient total logistics system to facilitate efficient transportation of goods

► Action Items:

1. Improve, integrate and expand from rail and road links to airport, seaport and inland port, industrial areas and hinterland
2. Provide adequate hinterland facilities for port expansion and logistics services
3. Expand road and rail transport infrastructure for hinterland logistics connectivity where feasible

REINFORCE THE MAINTENANCE REGIME OF TRANSPORT INFRASTRUCTURE

The maintenance regime for all assets and infrastructure need to be strengthened to ensure seamless, safe and efficient operations. The majority of delays and costs associated can be attributed to inadequate maintenance of transport infrastructure. This calls for better coordination between agencies and more efficient management of resources. Furthermore, the focus has been on corrective maintenance instead of preventive maintenance.

Ensure that all assets are in the best condition for operation and to enable delivery of reliable and efficient services, meeting users' expectations

Objectives:

- Ensure that all assets are in the best condition for operation and to enable delivery of reliable and efficient services, meeting users' expectations
- Minimise accidents, disruptions and costs associated due to lack of maintenance of transport infrastructure

► Action Items:

1. Implement preventive maintenance and rehabilitation for all transport related infrastructure assets for cost efficiency
2. Adopt best practices for all transport infrastructure maintenance, particularly rail and road. For e.g. usage of high grade and low maintenance materials, practice risk assessment and life cycle asset management
3. Strictly monitor performance-based contract in maintenance regime and increase the performance of the asset through proper maintenance



STRATEGY 2.5

ENHANCE COMPETITIVENESS IN AIR CARGO OPERATION TO SUPPORT MALAYSIA IN BECOMING A REGIONAL DISTRIBUTION CENTRE

Emerging global trends on air cargo are about to bring massive impact to the transport sector, thus ensuring appropriate infrastructure in place while maintaining safety have become an increasingly difficult task. As such, the current regulatory framework needs to be further scrutinised as the effect of increased regulations may dramatically increase the cost of doing business in addition to impacting transit times, damaging the value proposition of air cargo as a quick way to transport goods.

Objectives:

- Address air cargo global trends as to maintain regional competitiveness in air cargo operation
- Ensure that KL International Airport (KLIA) is the leading cargo hub within the region

► Action Items:

1. Facilitate the growth of Digital Free Trade Zone (DFTZ) and aviation support services, such as maintenance, repair, overhaul (MRO)
2. Position KLIA (KLIA Aeropolis) as the main cargo hub, Senai as southern regional hub and KKIA, Kota Kinabalu and KIA, Kuching as eastern regional hub
3. Facilitate handling transshipment cargo using multi-modal mode of transport by improving facilities, accessibility and affordability



MODERNISE INTEGRATED LOGISTICS TO REDUCE THE COST OF DOING BUSINESS

With the proliferation of technologies such as cloud-based services, miniaturised sensors and online purchasing there is strong demand for integrated logistics as the foundation of the transport industry. There is an urgent need to move towards web-based platforms for better utilisation of warehouse, goods vehicle and containers space through sharing approach to improve efficiency.

The Logistics and Trade Facilitation Masterplan 2015-2020 provides the strategic framework to resolve bottleneck in the logistics sector and elevate Malaysia to be come a regional player.

Objectives:

- Facilitate seamless movement of goods
- Reduce cost of doing business for transport-related activities
- Position Malaysia as a regional distribution centre

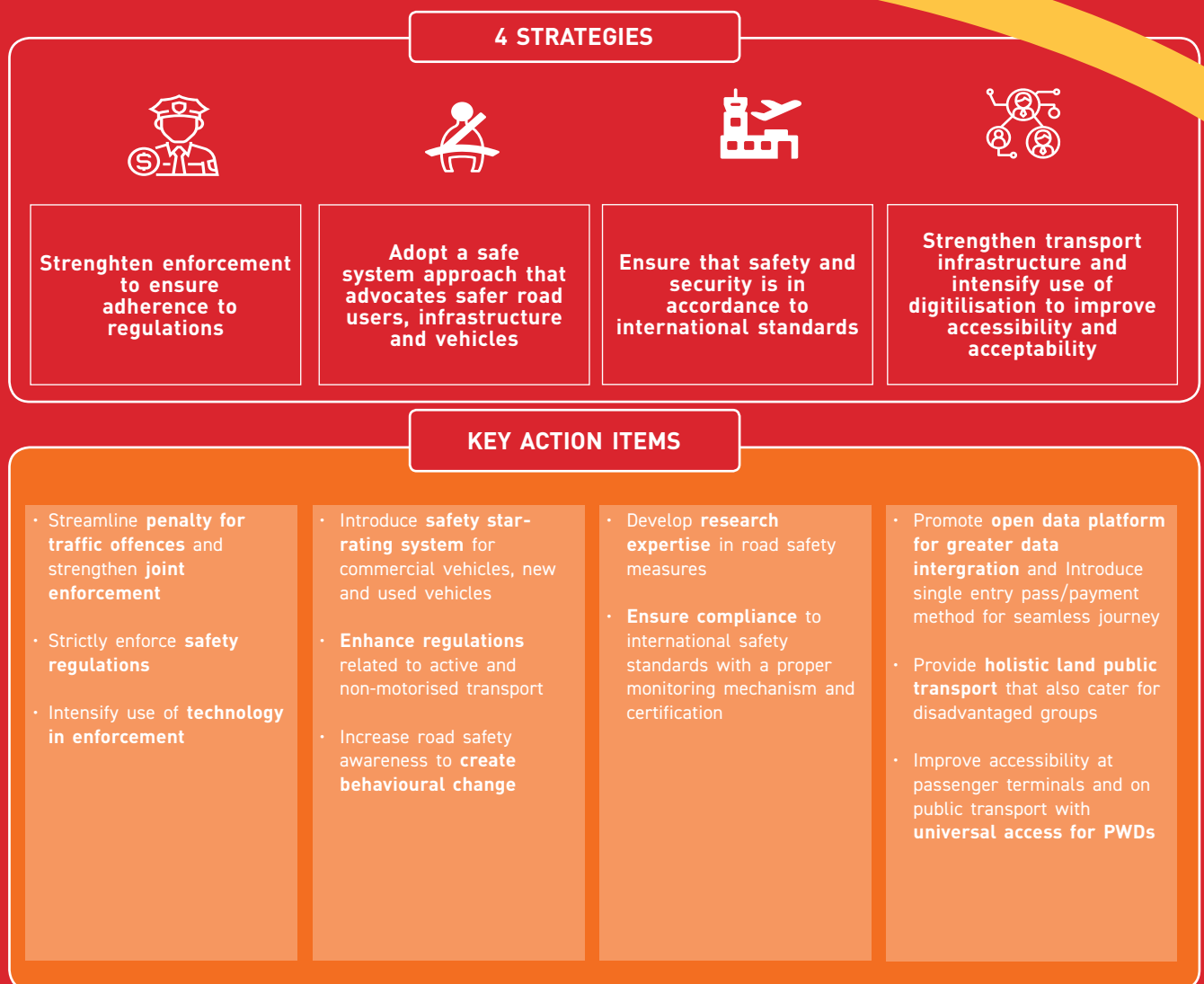
► Action Items:

1. Encourage the development of urban logistics distribution to cope with urbanisation and facilitate e-commerce activities
2. Improve the accessibility and affordability of delivering goods to the rural and remote areas
3. Impose track and trace requirement on logistics services providers
4. Develop freight villages (e.g. with parking, maintenance, loading & off-loading, resting place facilities) at strategic locations
5. Strengthen the monitoring system for container and trailer for efficient movement of containers



ENHANCE
SAFETY,
INTEGRATION,
CONNECTIVITY
AND ACCESSIBILITY
FOR SEAMLESS JOURNEY

4 strategies and 25 action items have been identified





THIS thrust is aimed at providing seamless journey for passenger and goods by enhancing safety levels, improving connectivity between transport modes, service integration through digitalisation and accessibility to transport services, including affordability. This thrust calls for greater inclusivity, by creating user friendly and customised services to cater for the physically challenged, elderly, women and children as well as those in the rural and remote areas. This thrust is directly linked to the social principle of sustainable transport.



OBJECTIVES

- Reduce road accidents and fatality rates
- Increase connectivity and service efficiency of public transport
- Increase accessibility of vulnerable groups to transport services
- Align future planning of transportation to ensure a high level of integration and efficiency
- Ensure compliance of aviation and maritime sector to international safety and security standards.



THIS THRUST WILL ADDRESS THE FOLLOWING ISSUES:

- High road accident and fatality rates
- Poor connectivity and integration between different modes of transport
- Inadequate first and last mile connectivity
- Inadequate facilities and services for the vulnerable groups (e.g. elderly, physically challenged, those living in rural and remote areas)
- Catering to the 'mobility as a service' trend

MEASURE OF SUCCESS:

- Reduced number of road fatalities and accidents
- Improved efficiency of public transport services
 - Reduced travel time compared to private vehicle travel
 - Reduced overall cost of travel
 - Reduced travel time
 - Better access to transport services
- Increase in public transport modal share

STRATEGY 3.1

STRENGTHEN ENFORCEMENT TO ENSURE ADHERENCE TO RULES AND REGULATIONS TO IMPROVE SAFETY, SERVICE QUALITY AND RELIABILITY

While there have been numerous advances in technology and enforcement techniques, the land transport sector faces issues such as unacceptably high accident and fatality rates, congestion, overloading and unreliable transport services. While the regulatory framework for the sector is deemed adequate, enforcement remains a key issue. There is an urgent need to strengthen enforcement capacity of related agencies to improve the safety, reliability and service level of transport providers.



Streamline penalty for traffic offences and strengthen joint enforcement for land transport

Objectives:

- Strengthen the capacity of enforcement agencies through means such as intensive adoption of technology

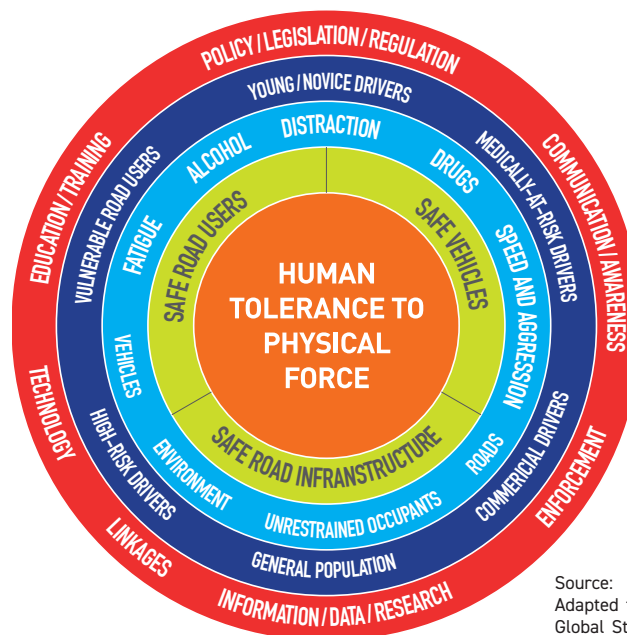
► Action Items:

1. Streamline penalty for traffic offences and strengthen joint enforcement for land transport
2. Strictly enforce safety regulations for land transport facilities and vehicles
3. Enforce stricter ICOP SHE (Industrial Code of Practice – Safety, Health and Environment) compliance, as part of licensing condition for commercial vehicles
4. Intensify the use of technology in enforcement
5. Improve regulations for enforcement agencies, and use high technology in promoting road safety
6. Strengthen enforcement capacity of related agencies with regards to safety and security for the air transport sector

STRATEGY 3.2

ADOPT A SAFE SYSTEM APPROACH THAT ADVOCATES SAFER ROAD USERS, INFRASTRUCTURE AND VEHICLES

Malaysia has among the highest road fatality risk (24 per 100,000 population) among the ASEAN countries. In 2017, numbers of deaths have increased to 6,740 with 63% from motorcycles. On yearly average, more than 4,000 motorcyclists were killed. Losses to the nation in year 2017 due to road accidents were estimated at RM8.8 billion. There is an urgent need to strengthen safety guidelines, regulations and enforcement related to safety.



Source:
Adapted from 2009 WHO report on the
Global Status on Road Safety

Objectives:

- Strengthen safety guidelines, regulations and enforcement related to road safety
- Reduce road accidents and road fatalities

► Action Items:

1. Improve safety and security features of vehicles to enhance drivers' experience
2. Introduce safety star-rating system for commercial vehicles, new and used vehicles
3. Impose safety requirement for land transport facilities especially for heavy goods vehicles (HGVs)
4. Enhance active mobility as a major facet in transport modes and enable requirements and regulations prioritising active and non-motorised transport
5. Increase safety mobility awareness and behaviour change through effective and comprehensive user behaviour improvement programmes and innovative ideas and techniques

STRATEGY 3.3

ENSURE THAT MALAYSIA'S TRANSPORT SECTOR'S SAFETY AND SECURITY ARE IN ACCORDANCE TO INTERNATIONAL STANDARDS

As aircraft manufacturers continue to advance its technology for potential commercial uses, it will be a difficult challenge for the regulator/authority to be in par with the rapid changes. The government will need to work more closely with the aircraft/drone manufacturers as well as experts from industry and international organisations (i.e. IATA, ICAO) to identify and implement regulatory changes in enhancing safety features to meet global trends.

The maritime industry is going through a stage of rapid technological development and change, including developments in the design and operations of ships. The regulators and maritime transport operators need to embrace latest technological enhancement in order to strengthen maritime safety and security.

Objectives:

- Ensure that airport and airline operators within Malaysia comply with the Standards and Recommended Practices (SARPS) that have been set by the International Civil Aviation Organisations (ICAO).
- Address safe and security issues at international level, specifically the ICAO through continuous engagement, cooperation and consultation
- Ensure that Marine Aids to navigation and related services are harmonised with the International Association of Marine Aids to Navigation and Lighthouse Authorities' (IALA) recommendations and guidelines
- Continuously adopt and implement conventions on safety and security set by the International Maritime Organization (IMO)

► Action Items:

1. Develop research expertise in road safety measures
2. Ensure compliance to international safety standards with a proper monitoring mechanism and certification
3. Adopt a centralised system to set a standard/guidelines of monitoring, enforcement and auditing the security and safety of transport hubs



STRATEGY 3.4

STRENGTHEN INFRASTRUCTURE/FACILITIES AND INTENSIFY THE USE OF DIGITALISATION TO IMPROVE CONNECTIVITY, ACCESSIBILITY AND ACCEPTABILITY

There is a demand for additional connectivity between various transport nodes (seaports, airports, terminals and inland ports) via roads and rail lines in order to reduce delays and cost of transporting passengers and goods. In addition to this, first and last mile connectivity will require greater attention to ensure higher utilisation of public transport services.

Prioritise movement of vulnerable users (e.g. pedestrian, active and non-motorised users) at pedestrian areas and within public transport nodes

Objectives:

- Optimise the utilisation of transport infrastructure and facilities
- Enhance connectivity and accessibility of public transport to promote modal shift from private vehicles to public transport
- Provide intelligent and shared mobility for goods and passengers

► Action Items:

1. Establish seamless connectivity between different modes of transport (rail, airports, seaports and roads)
2. Ensure efficient connectivity for first and last mile services through integration and collaboration
3. Ensure proper planning and implementation of sustainable public transport fares for general public for it to be the first choice as a transport mode
4. Develop necessary infrastructure to increase usage of active and non-motorised transport and allow them to be carried in trains
5. Enhance air connectivity by promoting all international airports as passenger hubs
6. Ensure ferry/cruise ship terminal and airports integrate land use with public transport
7. Provide facilities and services for water transport
8. Promote and encourage open data platform for greater data integration across all transport sectors and introduce single entry pass/payment method for seamless journey
9. Provide holistic land public transport services that can also cater to disadvantaged groups (i.e. PWDs and special needs group including the elderly, and pregnant ladies)
10. Improve accessibility at passenger terminals and on public transport with the aim of universal access for persons with disabilities (PWDs)
11. Prioritise movement of vulnerable users (e.g. pedestrian, active and non-motorised users) at pedestrian areas and within public transport nodes

POLICY
THRUST



ADVANCE
TOWARDS
GREEN
TRANSPORT ECOSYSTEM

5 strategies and 35 action items have been identified

5 STRATEGIES



Enforce compliance to acts/regulations & shift towards international environmental standards



Prioritise public transport network as a fundamental structure in urbanised areas



Accelerate implementation of low carbon mobility initiatives



Institute measures to control pollution, noise and waste from the transport sector



Develop effective CEPA to create behavioural change

KEY ACTION ITEMS

- Adopt **international sustainable indicators** for all levels of transport planning
- Institutionalise **green standards** for ports, airport, transport terminals and logistics
- **Limit development of new highways** in urban centres

- Align the planning of urban centres and public transport network **across national policy**
- Impose **TOD requirements** in urban areas and around public transportation nodes
- Encourage **Work-Play-Shop-Stay development concept**

- **Review Act 333** to support the growth and the use of EEV/ EV in Malaysia
- Encourage use of **different models of EEV**
- Formulate & implement **fuel economy policy**
- Develop **green index** and incentives to go green

- Develop **procedure for vehicles' end of life**
- Establish **guidelines for scrap waste**, refurbishment, recycling
- **Minimise noise pollution** from transportation infrastructure

- **Increase awareness** on benefits to use public transport
- **Understand travel behaviour** to identify right interventions
- Implement program to **promote behavioural change**



IN line with SDG 2030, particularly Goals 9 and 11, which emphasised on sustainable transport system for all and resilient infrastructure to support socio-economic development, this thrust will ensure that the transport system will be efficient, clean and resilient with minimal impact to the environment and natural resources, while serving the purpose of providing efficient mobility to the nation.



OBJECTIVES

- Safeguard the environment and manage our natural resources sustainably
- Reduce the carbon footprint of the transport sector by embarking on low carbon mobility
- Encourage use of cleaner fuels for transport
- Adopt international environmental standards and emulate best practices that supports the objective of sustainable transport
- Achieve green growth via low carbon mobility
- Improve quality of life of rakyat, including the health aspects through sustainable transport

THIS THRUST WILL ADDRESS THE FOLLOWING ISSUES:

- Air pollution, particularly greenhouse gas emissions from all modes of transport
- Unsustainable consumption of resources
- Poor waste management, particularly disposal of old vehicles and logistics waste
- Water pollution, particularly discharge of oil, chemicals, waste and ballast
- Noise pollution
- High fuel consumption especially in the land transport
- Compliance with environment laws, both national and international

MEASURE OF SUCCESS:

- Achievement of 45% reduction of greenhouse gas emission intensity of GDP by 2030 across all its key emitting sectors
- Adoption of cleaner fuel – such as biodiesel and electric vehicles
- Increase in public transport modal share

STRATEGY 4.1

ENFORCE COMPLIANCE TO ACTS/REGULATIONS AND SHIFT TOWARDS INTERNATIONAL ENVIRONMENTAL STANDARDS

There is a need for additional standards and regulations related to environmental protection in the transport sector, for example there is an absence of standards related to green logistic and green transport terminals. In areas where standards and regulations are available, there are issues on level of compliance, due to the voluntary status of standards and poor awareness and lack of enforcement on regulations.

At the 21st Conference of Parties of United Nations Framework Convention of Climate Change (COP21 UNFCCC), Malaysia has set a higher goal of reducing its GHG emission intensity of GDP by 45% by 2030 relative to the emission intensity of GDP in 2005. 35% is unconditional and a further 10% is condition upon receipt of climate finance, technology transfer and capacity building from developed countries.

Malaysia has set a higher goal of reducing its GHG emission intensity of GDP by 45% by 2030

Objectives:

- Minimise the environmental impact from transport sector growth and development
- Reduce emission of GHG, black smoke and other pollutants from the transport sector
- Improve green initiative support among all transport sectors

► Action Items:

1. Continuously benchmark and adopt international sustainable indicators for all levels of transport planning in all related agencies
2. Institutionalise green port, green airport, green transport terminals and green logistics
3. Ensure highway developments to be based on Malaysia Green Highway Index (MyGHI)
4. Limit the development of new highways in urban centres
5. Reform towards public transport network-oriented conurbation growth
6. Move towards a more systematic, holistic and sustainable practice of prioritising active mobility and public transport modes
7. Facilitate and encourage green mobility

PRIORITISE PUBLIC TRANSPORT NETWORK AS FUNDAMENTAL STRUCTURE IN CHARTING OUT SUSTAINABLE SPATIAL AND TRANSPORTATION GROWTH IN URBANISED AREAS

Best practises from around the world show that town planning must be integrated seamlessly with public transport development. This is becoming especially relevant as cities and population in Malaysia continue to grow. Transit oriented developments (TODs) represent an ideal way to address this issue. Although the importance of TOD is recognised in various national plans such as National Physical Plan and Land Public Transport Master Plan, the adoption rate to date has been relatively low.

In addition to this, ports and airports should be subject to the same requirements on land usage and public transport integration due to the need for access and impact on surrounding land, effectively being treated as sub-cities in their own right.

Objectives:

- Integrate land use planning and public transport planning
- Ensure integration of developments with the public transport system to reduce travel demand via private vehicles

► Action Items:

1. Align the long-term planning of urban centres and public transport network across the National Transport Policy, National Urbanisation Policy and the National Housing Policy
2. Continuously ensure that development guidelines integrates land use and public transportation
3. Impose requirement for TOD in urban areas and around public transportation nodes
4. Encourage self-contained or complete Work-Play-Shop-Stay development concepts to minimise travel needs
5. Greening the transportation infrastructure to restore damaged urban environment in urban renewal infrastructure effort for sustainable city

STRATEGY 4.3

ACCELERATE IMPLEMENTATION OF LOW CARBON MOBILITY INITIATIVES

Mobility, in particular private transportation, has traditionally been viewed as carbon intensive with significant efforts focused in mitigating fuel consumption and carbon emissions. Private transportation has led the way in developing low carbon alternatives such as hybrid and all electric vehicles, this in turn has spread to the commercial sector. Future policies take into account the need to increase the adoption rate of low carbon initiatives as well as planning for future infrastructure to minimise unsustainable consumption patterns.

Objectives:

- Reduce greenhouse gas (GHG) emission from transport sectors
- Increase adoption of energy efficient vehicles (EEVs) as a preferred mode of transport
- Increase utilisation of public transport and non-motorised transport

► Action Items:

1. Execute implementation of Low Carbon Mobility Blueprint Action Plan
2. Study current regulation in Act 333 to support the growth and the use of EEVs/electric vehicles (EVs) in Malaysia
3. Develop sustainable and economically viable infrastructure for EEVs e.g. charging stations for EVs
4. Provide incentives for EEV manufacturers and users, and consider different models of EEV
5. Formulate and implement fuel economy policy
6. Develop cleaner fuel or improved fuel standard
7. Develop green index and incentives to encourage transport operators to go green
8. Mandatory requirement for purchase of low carbon emission vehicles in Government Green Procurement



INSTITUTE MEASURES TO CONTROL POLLUTION, NOISE AND WASTE FROM THE TRANSPORT SECTOR

Vessel traffic along Malaysia's coastline has increased steadily, increasing water-borne pollution and impacting the maritime ecosystems. In addition to this there is a need to ensure shipping companies are fully compliant to environmental regulations to ensure minimal impact on the environment as well as living standards of those living along the coastline and inland waterways.

Economic progress has led to a greater percentage of vehicle ownership and usage in Malaysia. However, there is an urgent need for a regulatory framework to ensure proper disposal of vehicles as well as efficient management of logistics waste. With increasing population density in urban areas, it is also critical to ensure that noise pollution is suitably managed, particularly along key transport corridors.

Minimise the impact to the environment resulting from the pollution created by the transport sector

Objectives:

- Ensure waste products of the transport sector are systematically and properly treated and disposed
- Minimise the impact to the environment resulting from the pollution created by the transport sector

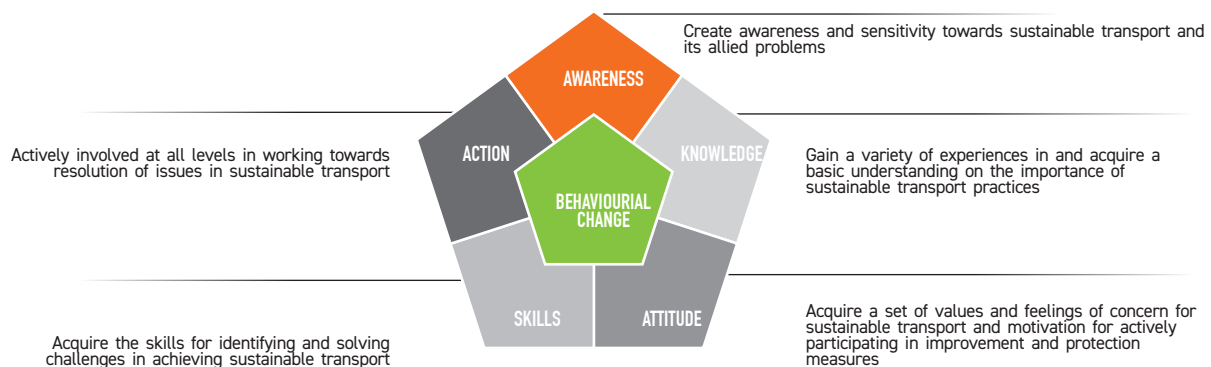
► Action Items:

1. Develop and enforce regulations for vehicles' end of life (commercial & private vehicle)
2. Establish guidelines for scrap waste, refurbishment and recycling services
3. Encourage reuse and recycling of dredging material
4. Implement a Global Market-Based Measure (GMBM) scheme in the form of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) to address any annual increase in total CO₂ emissions from international civil aviation
5. Minimise noise pollution from transportation infrastructure

STRATEGY 4.5

DEVELOP EFFECTIVE COMMUNICATION, EDUCATION AND PUBLIC AWARENESS (CEPA) TO CREATE BEHAVIOURAL CHANGE TOWARDS PRACTICES OF SUSTAINABLE TRANSPORT

The importance of behavioural change in achieving the mission to increase sustainable practice in managing the transport sector is inevitable. However, the level of environmental awareness and the benefits of adopting sustainable transport practices among transport operators, manufacturers, service providers and users is still low, hence hindering efforts to shifts towards green practices. It is important to note that increased awareness itself is not sufficient and must be followed by behavioural change to create an impact.



Source: Adapted from AKASA Model, Tbilisi Declaration (UNESCO, 1977)

Objectives:

- Promote awareness to transport operators and service providers to prioritise quality service delivery to enhance the productivity of the transport sector
- Encourage modal shift from private vehicles to public transport
- Inculcate positive behaviour such as proper road usage etiquette

► Action Items:

1. Develop communication mechanisms to increase awareness on benefits of using public transport to increase utilisation
2. Conduct research to understand travel behaviour and travel pattern for right intervention to promote behavioural change
3. Implement programs to promote behavioural change
4. Strengthen collaboration with Ministry of Education (MOE) to increase awareness and inculcate green behaviour among school students

POLICY
THRUST

5

EXPAND GLOBAL
FOOTPRINT
AND PROMOTE
INTERNATIONALISATION OF
TRANSPORT
SERVICES

3 strategies and 12 action items have been identified

3 STRATEGIES



Create an environment that facilitates local transport industry operators to become regional or global players



Facilitate regional cooperation and agreements that improve the transport industry



Ensure transport-related agencies are sufficiently equipped to support drive in improving Malaysia's ranking in global competitiveness indices

KEY ACTION ITEMS

- Promote and support expansion of transport service businesses abroad
- Develop standards for industry players readiness on equipping hauliers for international market

- Expedite implementation of regional and international transport facilitation agreements
- Facilitate implementation of AEC blueprint and other international standards

- Address fundamental issues related to the competitiveness indicators
- Develop sufficient capacity and capabilities at transport-related agencies and institutions



THE internationalisation of transport service providers will be a key lever to take the transport sector to the next level. This thrust strives to promote Malaysia's transport service providers to expand their business, export their services and penetrate the regional and global market. Currently, there is high demand for door to door multimodal transport, and integrated logistics services to cater to bigger volumes and delivery to larger markets. This creates case for transport providers to merge, collaborate or coordinate their activities to achieve economies of scale and tap into larger global trade.



OBJECTIVES

- Develop domestic logistics by strengthening transport service providers to enable them to compete at an international level, particularly in the ASEAN region
- Attract foreign investment to capitalise on Malaysia's strategic advantage as a regional and global distribution hub
- To assist in building alliances and mergers

THIS THRUST WILL ADDRESS THE FOLLOWING ISSUES:

- Domestic logistics service providers not competing at a regional or global level
- Delays in implementation of regional and international agreements
- Potential challenges associated with Asean Economic Community (AEC), e.g. movement of people and goods

MEASURE OF SUCCESS:

- Number of local players that are exporting their services abroad

STRATEGY 5.1

CREATE AN ENVIRONMENT THAT FACILITATES LOCAL TRANSPORT INDUSTRY OPERATORS TO BECOME REGIONAL OR GLOBAL PLAYERS

The large majority of local industry players have remained focused on the domestic market with little to no presence overseas. With increasing integration of the ASEAN region, there is significant potential for overseas expansion. In addition, global transport industries will place additional pressure on local operators to increase their competitiveness on a regional or global basis. Coupled with demand from consumers for increasing integration as a result of technological advances, it is clear that local industry must make a concerted effort to expand operations overseas.

Ensure industry players/operators are competitive and able to expand their services overseas

Objectives:

- Ensure industry players/operators are competitive and able to expand their services overseas
- Encourage local operators to upscale their services and invest abroad

► Action Items:

1. Promote and support expansion of transport service business abroad
2. Strengthen Industrial collaboration program to upraise local players
3. Identify and adopt offset program to ensure knowledge and technology transfer
4. Develop standards for industry players readiness on equipping hauliers for international market (i.e. halal logistics and Muslim-friendly transport services, e-commerce and cold chain)
5. Encourage Malaysian port and airport operators to go global

STRATEGY 5.2

FACILITATE REGIONAL COOPERATION AND AGREEMENTS THAT IMPROVE THE TRANSPORT INDUSTRY

The ASEAN Economic Community (AEC) strives to create a single economic entity with seamless cross border travel and trade for both goods and passengers. Given the geographical and regulatory challenges involved in integrating 10 nations and economies, a high level of cooperation and leadership is needed.

With a population of over 622 million and a combined GDP of US\$2.6 trillion, the AEC represents a market with significant opportunities for the transport industry which in turn will have catalytic effects on the economy and movement of citizens.

In addition to this, the advance of technology and communications points towards an increasingly integrated world. Blueprints, agreements and partnerships – both current and future – will need to prioritise the strengthening of regional and global cooperation. These agreements and partnerships – whilst carefully developed and scrutinised – need to be developed in a timely manner and complied with.



Objectives:

- Strengthen regional cooperation to facilitate the implementation of blueprints and agreements

► Action Items:

1. Facilitate implementation of ASEAN Economic Community Blueprint and other international standards
2. Expedite the implementation of regional and International transport facilitation agreements
3. Implement all ASEAN and Dialogue Partners air transport agreements
4. Facilitate the implementation of Kuala Lumpur Transport Strategic Plan 2016-2025
5. Establish good working relations between Malaysian ports and ports in ASEAN and Asia
6. Maintain Malaysia's participation in international fora

STRATEGY 5.3

ENSURE TRANSPORT-RELATED AGENCIES ARE SUFFICIENTLY EQUIPPED TO SUPPORT DRIVE IN IMPROVING MALAYSIA'S RANKING IN GLOBAL COMPETITIVENESS INDICES

Global rankings are being viewed with increasing priority by both governments and investors globally. Governments view them as a set of diagnostic tools that they can use to benchmark institutions and practises globally as well as a measure of the country's standing on a global platform. Similarly, investors use global rankings as an indicator of a country's attractiveness for investment based on a variety of metrics.

Global rankings such as the World Economic Forum's Global Competitive Report utilise a wide variety of data in developing their rankings. Typically, a large number of agencies or institutions are responsible for updating this data or implementing initiatives which in turn can improve the data. In some cases it has been noted that Malaysia's rankings have been impacted due to data not being updated prior to the cut-off date that international organisations use to gather data or the agencies themselves are not equipped with sufficient capacity or capability to improve the data.

Malaysia is committed to improve its position in global indices in order to become even more attractive to potential investors

Objective:

Ensure transport-related agencies are aware of and sufficiently equipped to execute their roles in updating data and improving processes to support the country's improvement in global rankings.

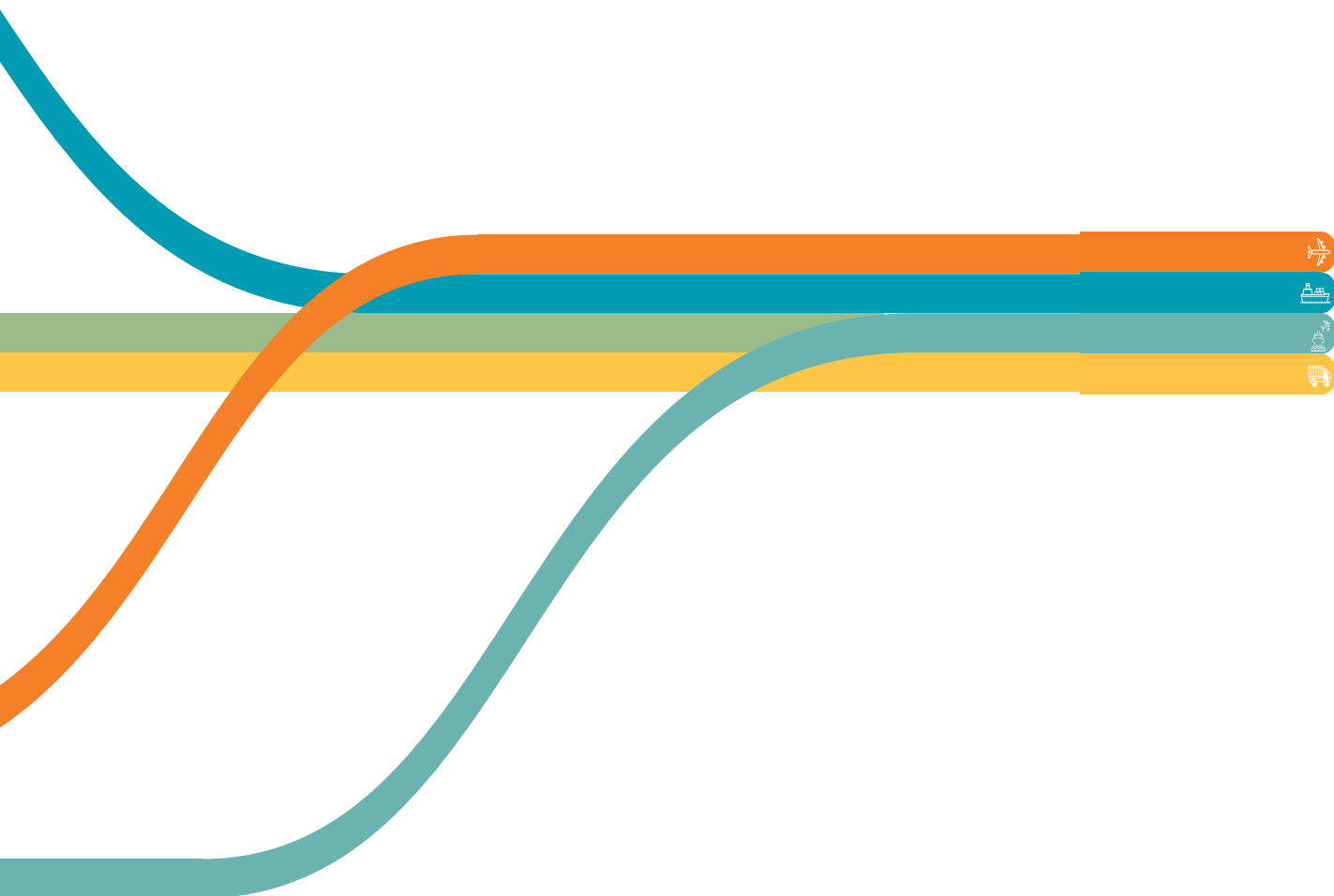
► Action Items:

1. Address fundamental issues related to the competitiveness indicators
2. Develop sufficient capacity and capabilities at transport-related agencies and institutions to ensure they are able to execute initiatives to improve Malaysia's ranking in global indices

CONCLUSION

The NTP 2019-2030 sets the policy direction for the transport sector to strengthen its role to support the economic expansion and provide a good quality of life for all Malaysian through the provision of a sustainable, connected, accessible and modern transport system. Emphasis will be given to ensure that development of infrastructure is carried out in a sustainable manner, conserving natural resources and cutting down pollution. With Malaysia having made commitments to programmes such as to the Sustainable Development Goals 2030 (SDG), it is critical that measures are undertaken to achieve the goals in the SDG.

Effective implementation of the strategies and action plans outlined in this policy will debottleneck some of the long standing issues and enhance the potential of this sector towards developing a robust transport sector. The success of this policy is dependent on close collaboration and cooperation among different agencies which are responsible for transport planning, regulation and operations, to systematically implement the policy thrusts, strategies and action plans outlined in this document. It is only through dedication, commitment and support from all stakeholders that the aspiration of this policy to develop a sustainable transport system that accelerates economic growth and supports the well-being of the *rakyat* in line with an advanced nation status will come into fruition.





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