# Feedback on New Zealand Transport Infrastructure Strategy

## 1.0 About this Feedback

### 1.1 Transport Australia Society

This feedback has been developed by members of Engineers' Australia's Transport Australia Society (TAs). TAs is a technical society for transport professionals in Australia. It focuses key transport decisions affecting the wellbeing, productivity and sustainability of cities and regions. TAs seeks to improve public debate on strategic transport issues, and to provide valuable expert advice to governments and others making decisions regarding transport policy, reform and infrastructure investment.

### 1.2 Introduction

Transport Australia Society understands the extensive background research that has gone into the preparation of the New Zealand Infrastructure Strategy (still in progress). The purpose of this submission is not to provide detailed comment on the draft strategy. Rather, it is to provide a high-level overview concentrating on transport infrastructure, which is the area of expertise of TAs. TAs has examined the following documents prepared by or for the New Zealand Infrastructure Commission:

- Transport Sector State of Play Discussion Document (2021)
- New Zealand Infrastructure Strategy Consultation Document (May 2021)
- Lifting Our Gaze. Report prepared by Ernst and Young for NZ Treasury and NZ Infrastructure Commission (January 2020)

TAs considers that the New Zealand Infrastructure Commission (NZIC) has developed a well-rounded understanding of the purpose and role of infrastructure. The EY "Lifting our Gaze" report provides a strong case for infrastructure projects that deliver wider public benefits. It noted that a major role of infrastructure is enhancing economic and social value and that it is ironic that past infrastructure investments were mostly shaped by narrow investment decisions, with individual agencies focusing on how their own projects would deliver projects specific to their sector. In October 2019, the NZ Government's procurement rules were changed to reflect a focus on wider public outcomes. TAs are supportive of these changes to the evaluation of infrastructure projects that appear to have been accepted and supported by the NZIC. TAs congratulates the NZIC on the general approach it is advocating on the assessment and evaluation of infrastructure. The feedback provided below are intended to add value to discussion on a number of important issues relating to transport infrastructure during development of the NZ Infrastructure Strategy.

## 2. An Integrated People Focused Approach

The draft NZ infrastructure plan is focused on improving the wellbeing of its citizens. The vision is: "*Infrastructure lays the foundation for the people, places and businesses of New Zealand to thrive for generations*". The infrastructure plan must take a long term perspective to address important future challenges such as climate change, population growth and demographic change. The NZIC notes that future infrastructure must "*support the environmental, social, cultural and economic wellbeing of all New Zealanders*". A survey of New Zealanders undertaken by the NZIC has shown that "*our environment is the top priority when it comes to making infrastructure decisions*".

A future infrastructure plan must address future challenges and should not continue to be formulated by expanding on past plans and trends. A paradigm shift in the planning and development of infrastructure is required. This has been acknowledged by both the NZIC and Infrastructure Australia. In its 2019 Infrastructure Audit, Infrastructure Australia advised that it will be necessary to evolve the way infrastructure is planned and delivered. Specifically, it supported a shift from the traditional approach of "*predict and provide*", based largely on an extrapolation of past trends, to a more forward looking "*vision and validate*" model. Infrastructure Australia identified a number of broad trends and influences that should be considered to help explain the challenges and opportunities for future infrastructure:

- Environment and resilience: our environment is increasingly vulnerable to the effects of climate change and our response to reducing emissions is falling behind international best practice.
- Quality of life and equity: our quality of life is high but not everyone benefits equally.
- Population and workforce participation: our population is growing and participation in the workplace is increasing for women and older people.
- Economy and productivity: economic growth is slowing while our economy is transitioning towards a service and knowledge-based future, which is increasingly based in cities
- Technology: technology is transforming the way we live, but not everyone benefits equally
- Cost of living and incomes: the cost of living is rising for some people, while incomes have not grown substantially.
- Community preferences and expectations: Communities are expecting more customised, real time and interactive services and products from governments and businesses.
- Consideration should be given to how these trends will impact the demand for different types of infrastructure and how the infrastructure we provide will influence these trends and shape our future.

## 3. Transport Infrastructure

This section provides comment on important issues relating to transport infrastructure. Many of these issues have already been identified in preliminary documentation for consideration in development of the New Zealand Transport Infrastructure Strategy.

### 3.1 Funding and Affordability

Transport infrastructure is becoming more expensive to provide and the gap between perceived needs and the ability to fund is increasing. Some stakeholders in the transport sector, have responded by requesting increased funding from governments. Whilst increased funding may be warranted in some cases, across the board funding increases to the extent requested, is unsustainable. Alternative low-cost strategies will need to be prioritised over high cost transport infrastructure over at least the next decade to allow essential infrastructure needs and available funding to be rebalanced.

### 3.2 Road Safety

New Zealand has one of the worst road safety records of all OECD countries. In 2018, deaths per 100,000 population was 7.72 compared to 4.54 in Australia and the OECD median of 4.97. Targeted low-cost infrastructure improvements can significantly reduce road deaths and serious injuries. Road safety should be given a higher priority in the New Zealand Transport Infrastructure Strategy. The following low-cost infrastructure programs are suggested for consideration:

- **Regional Road Safety Program** to implement low cost safety treatments such as sealing shoulders, installing audible edge lines and medians to address run off road and head on crashes. A program approved in Western Australia to treat 17,000 km of roads at a cost of $900 million has been estimated to reduce regional road trauma by 60%.
- **Metropolitan Intersection Safety Program** designed to deliver low cost innovative treatments and reduce speed through intersections, where a high proportion of urban crashes occur. It is proposed that the designs are based on the UK's new design manual "*Manual for Streets*" and incorporate narrow traffic lanes and traffic management devices on approach to and through the intersections. The approach proposed enables construction to occur without road widening, which keeps costs low.
- **Safe and Connected Active Street Program.** Starting at the busiest and densest areas of our major cities, this program is designed to provide a connected network for cyclists and pedestrians, which are among the most vulnerable users of the street system. The intention is to implement connected treatments such as bicycle boulevards that can be implemented at low cost and keep users safe by keeping speeds for all users below 30km/h.

### 3.3 Land Use Transport Integration

Much of the transport inefficiency in Australian and New Zealand cities is due to housing being located too far from jobs and centres of commerce. In most cities most jobs and services remain in inner city areas whilst the majority new housing development has been in outer suburbs, most often in purely suburban precincts remote from efficient public transport. This has resulted in thousands of people taking long distance trips every day, mostly in single occupant cars. Congestion has continued to increase regardless of significant funding being spent on transport infrastructure. The current land use structure is the greatest single impediment to reducing congestion and lowering the growth of greenhouse gas emissions from transport. This is a complex issue, requiring a long-term solution and many policy levers will need to be pulled in unison. A comprehensive plan to deliver urban infill, mostly in central and inner areas of cities, but also in centres and public transport hubs in outer areas, is necessary to improve transport outcomes and make transport affordable in the long term. Many cities have commenced this process, but at too modest a scale. Although this may be seen to be a planning issue, the national infrastructure planning agencies need to endorse this approach as a necessity to achieving their major aims of reducing growth of congestion and greenhouse gas emissions.

### 3.4 Impacts of Induced Demand

The impacts of induced demand have been known to exist for over 30 years and have been reported in international studies. It applies to all forms of transport. Put very simply, supporting infrastructure for any mode of travel will increase travel by that mode. This can be an advantage for a new rail line, where the policy position is to increase public transport and reduce dependence on cars. However, induced demand for car travel from expansion or widening of the road system will erode any initial benefits of reduced congestion, often within five to seven years. A large road project is likely to induce a large increase in car travel within and in proximity to the area of construction, as well as a reduction in other modes of travel, particularly public transport. Infrastructure agencies must take account of induced demand if they are to avoid erroneous outcomes from the business case on which they rely for their advice to Government.

### 3.5 Transport as a System

The NZIC has identified that transport operates as a complex system. It is important that transport infrastructure and policy are coordinated to ensure they benefit the transport system as a whole, with reduced focus on indigo elements. System wide demand management measures, such as road pricing, will be necessary to deliver a balanced, efficient transport system.

### 3.6 Sustainable Mobility Management Approach

Sustainable Mobility Management (SMM) utilises demand management and multi-modal transport and land use planning and targets a more modest level of future car use that is compatible with network capacity. It differs from more traditional approaches in that, instead of accepting and encouraging car growth at the expense of other modes, it provides more options for travel and provides some disincentives to driving, by managing demand. A major objective of SMM is to improve transport efficiency by reducing the volume of low occupancy vehicles in the traffic stream by a variety of means, including demand management, provision of priority lanes for bicycles, high volume public transport vehicles and high value trucks, where the circumstances warrant it. A variety of travel demand management strategies have proved to be effective in reducing car travel in congested areas of cities, including behavior change programs, travel plans for centres and corridors, parking restraint policies and road user pricing in various forms. TAs supports the adoption of a sustainable mobility management approach, including a wide range of demand management policies. TAs commends the NZIC's intention to examine the potential for a broad-based road user charging scheme. TAs believes that the introduction of a scheme of this nature is inevitable in the future and favors a variable road charging scheme with higher charges being applied when congestion is highest.

## 4. Conclusions

- TAs congratulates the New Zealand Infrastructure Commission on the general approach it is advocating on the assessment and evaluation of infrastructure.
- TAs supports a paradigm shift in the planning and development of infrastructure. Fine tuning of past plans will be insufficient to address future challenges.
- Alternative low-cost strategies will need to be prioritised over high cost transport infrastructure over, at least, the next decade, to allow essential infrastructure needs and available funding to be re-balanced.
- A road safety infrastructure development plan should be incorporated as a core element of the transport infrastructure strategy, in view of New Zealand's unacceptably high level of road trauma.
- Much of the transport inefficiency in Australian and New Zealand cities is due to housing being located too far from jobs and centres of commerce. A comprehensive plan to deliver urban infill is necessary to improve transport outcomes and make transport affordable in the long term.
- Infrastructure agencies must take account of the impact of induced traffic from road expansion projects to determine if reductions in congestion will be sustained beyond the short term and deliver value for money.
- A sustainable mobility management approach that provides disincentives to car driving should be considered as part of urban infrastructure development.
- TAs commends the New Zealand Infrastructure Commission's intention to examine the potential for a broad-based road user charging scheme. TAs believes that the introduction of a scheme of this nature is inevitable in the future and favors a variable road charging scheme with higher charges being applied when congestion is highest.

Note: Please do not hesitate to contact [redacted] is the point of contact for this feedback.

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