

**NATIONAL LOCAL ROADS AND TRANSPORT CONGRESS 2016
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KEYNOTE ADDRESS BY MARTIN MATTHEWS

INTRODUCTORY REMARKS

Thank you, and good morning.

It's great to be here in Toowoomba. I am thrilled to have the opportunity to offer you some thoughts to kick off the Congress.

I want to share some ideas about the theme of infrastructure and developing regions, and challenge how you might both think about these issues, and possibly how you might approach them in future.

I am also going to encourage you to think a bit differently about the future of transport and mobility, and the implications this may have for government at every level in Australia.

I think all governments need to get their heads around the fact that we are on the cusp of a paradigm shift. A shift that will, over the next decade or so, disrupt much of the conventional wisdom and approaches to thinking about transport solutions. Like Uber, some of these changes are coming, whether governments are ready for them or not.

I also want to talk today about how governments and councils will need to increasingly work together to deliver results for citizens and businesses, and why it will become more important to have robust and durable arrangements to build alignment between governments about transport policy, regulatory, and investment settings.

In my previous capacity as Secretary for Transport in New Zealand, I considered one of my key responsibilities was to provide strategic leadership for the transport system. We described the Ministry's purpose as *ensuring our transport system helps New Zealand thrive*.

There are two ideas in that statement that I think are particularly important.

The first is to think about transport as a system – like any system, it requires all the component parts to work together to be effective. The system can't therefore be defined by the administrative boundaries of councils, governments, or different institutions.

The second idea is that government's interest in transport is not as an end in itself, but for the other things it enables for society and businesses.

I established in the Ministry what we called our greatest imaginable challenge. That challenge was *to double the value from transport initiatives*. I wanted my staff to be ambitious about the difference we could make as the government's transport advisors.

I challenged them to be open to new ways of thinking, or approaches to dealing with transport issues. And, as the stewards of the system, I wanted to ensure we were thinking not just about the issues and priorities of today's government, but how we ensured we could serve the next government, and the one after that, and so on.

I wanted us to have at least one eye on the longer term issues of importance for the transport system, and to think strategically about future policy choices.

I am certain you all know how important the transport system is to economic performance- locally, nationally and internationally. The transport system is what connects most businesses to their markets, and people to their work. A poor functioning system will reduce productivity and business competitiveness - something that is pretty important for a trading nation like Australia.

Investment in transport has historically been a significant driver of economic growth and improved productivity. For example, investment in railways in the late 19th century, made farming and other industry viable in areas that were once too difficult to access, or too remote from their markets.

Transport investment has also allowed businesses access to a wider labour market. Public Transport, and the increased levels of personal mobility through the 20th century, increased the distances people could travel to their work, and consequently the size of the labour market available to businesses.

Transport also opened up new and larger markets that have allowed businesses and GDP to grow. Again in the 19th century, refrigerated shipping gave Australia and New Zealand access to new international markets for our primary products. In recent decades, international aviation provided the basis for today's thriving tourism industry, and the ability to export high value, time sensitive, products almost anywhere in the world.

As these examples demonstrate, many of the benefits from investment in the transport system are seen most clearly when an economy is developing, or when significant developments, or changes – paradigm changes – take place in the transport system.

But, between these significant historical transitions, the focus has tended to be on refinements that reduce costs, or improve productivity of the established system.

This is what we currently focus on. For example, understanding where the chock points are in the transport system, and fixing them, or finding other ways of improving freight productivity. In both Australia and New Zealand, I think this has been the focus of transport policy and investment for the last few decades, at least. And it is still the focus of most road agencies and regulators.

The question for you all to consider is whether the next decade, or so, will be a period to focus just on how you might enhance the performance of an established system, or whether it's a period where your actions could help a new paradigm take hold?

I personally think we need to be open to a new paradigm.

But, I am currently not convinced that regulators or road agencies have got their minds around this possibility. I am also not convinced that the conventional approach to transport planning can easily embrace such change.

Currently, we typically extrapolate existing trends to predict future requirements – essentially assuming the future will follow the patterns of the past.

As I will outline in a moment, I seriously question if that will be the case over the next thirty years, and suggest there will be some new, and very different, ways of lifting the performance of the transport system.

THE FUTURE OF TRANSPORT AND MOBILITY

So, let me turn now and talk about the future of transport and mobility.

I want to acknowledge before I go any further that I am very well aware that this Congress' focus is on local roads and transport, and that many of you here are responsible for rural areas and smaller towns.

I will nonetheless take a few minutes to talk about what I think is going to happen in the bigger cities across Australia; because this will be relevant to how you might think about the longer term transport issues in your areas.

As I have already mentioned, I believe we are on the cusp of a paradigm shift. This change will roll out over the next 20-30 years, and you won't be immune from it.

There are many sceptics who think, for example, it will be a very long time before autonomous vehicles will become common place. I think they are wrong. I believe these vehicles, and the associated changes that technology will bring about, will be with us much sooner, and go much further than most of us can currently imagine.

A great deal of change can happen in just 30 years. It's happened before in transport as I have said. In this regard, I often think of the changes that happened during the life of my grandmother. She was born in 1894, four years before the first motor vehicles came to New Zealand. I expect, by the early 1900's, as a young girl, she would have sometimes seen a motor vehicle, but it would have been a rare and wondrous thing.

(SLIDE 1 - Chrysler)

She could not have imagined as a young girl that, by 1927, she and my grandfather would own this Chrysler – which incidentally I now own, and is still in its original condition after nearly 90 years.

So, in the space of just 30 years, motor vehicles had gone from being the source of curious wonder, to being owned and used in daily life by ordinary families. In the 1920s these vehicles changed the way people led their lives, worked and travelled. I think the same sort of transformation is about to occur again.

The effect of autonomous vehicles, and the technologies that will connect them to other vehicles and systems, will see future generations choosing to buy their mobility as a service. They won't own vehicles like most of us do today. This is because, for people in big cities at least, it simply won't make sense to own a car anymore – and just to avoid any suggestion that I might have certain political leanings against cars, I'm a self-confessed petrol head who currently owns 7 cars.

(SLIDE 2 - supermarket)

I think people will buy what they want, when they want it. Technology will do to mobility, what supermarkets did for food supply. People will have greater choice, it will be more convenient, and it will be cheaper to buy rather than own in many cases.

(SLIDE 3 – mobile tablet)

And, we will buy our mobility services just like we buy mobile phone services today. Some people will buy an agreed level of service for a period. Others may pay as they go.

Fuel taxes will be a thing of the past because, like telecommunications and other network services, there will be a network charge embedded in the service fee, and that charge will probably vary according to the time, location, and level of demand in the system.

Some people think these changes will see more vehicles on the roads, making congestion in big cities worse. They argue that because older and younger people will be able to travel independently it will result in more vehicles. This is possible, but I think emerging patterns, already evident in other parts of the world, show future generations will be much more willing to share their rides than we currently do.

These changes will transform how our cities work. They could solve congestion and the need for more road space and parking. Connected and autonomous vehicles will drive closer together reducing the space needed between them.

Four lanes will be possible where we currently have three. They will work out the best routes and speeds for every user. Traffic lights will become museum artefacts as the vehicles will manage intersections more effectively. And they won't need parking either.

(Slide 4 – PT)

Public transport will also be impacted by these changes. Mass transit will still be needed in big cities to move large numbers of people to some destinations. But the ability to buy, and share, mobility with others will be more cost effective, and convenient for some people, than traditional public transport services.

Changes in freight and logistics can also be expected.

(SLIDE 5 – platooned trucks)

Platooning of heavy trucks is already being trialled. These will potentially bring massive improvements in productivity and operating costs. While in some parts of Australia these road trains may not be a problem, in some other parts they will require dedicated corridors. This will be costly.

But here's a thought, once these platoons are autonomously guided, these vehicles will pretty much do exactly what trains can currently do – except they won't use a 19th century guidance system called rails. They will use 21st century guidance systems at a fraction of the cost of rail. Maybe rail will become a redundant technology, and we could re-use some rail corridors more economically as freight corridors, using only concrete tracks for autonomously guided and platooned heavy trucks?

(SLIDE 6 – Airship)

I know this will seem even more far-fetched, but people are developing and trialling airships. If these become viable they could change freight and logistics as fundamentally as containers did 40 years ago. These don't need Ports or Airports to load and unload. And nor do they need all of the associated land infrastructure to access remote or difficult locations. Just imagine how big a game changer these would be if they become a reality.

(SLIDE 7 – robot thinking)

All these things I have mentioned will challenge the role of government, and the traditional ways they have thought about transport and mobility. Like telecommunications and broadcasting, which government once owned and funded, transport will be similarly changed. The private sector will more effectively deliver solutions, and markets will emerge where once there were only state monopolies.

How governments regulate will also need to be re-invented. Our current regimes are largely designed around setting and enforcing limits about choices that humans make - things like speed, or their level of impairment. This may not matter if the person is no longer in control of the vehicle.

Just think for a moment what sort of impact this future could have on infrastructure investment strategies for large cities. The traditional approach of road authorities, and governments, has been to focus on increased road capacity and public transport – both as it were, supply side interventions.

The things I have described are mostly about demand side changes. If government's, their regulators and road agencies all focussed more on how to use these opportunities to shift demand in large cities, this could potentially reduce massive investment programmes currently planned for those cities in the longer term.

The OECD think tank on transport has estimated that a mid-sized European city would only need a vehicle fleet that is 10% the size of the current one. Just think how, if this became a reality, it might alter a city's planning and investment assumptions.

Last year, as part of a review of the long term transport strategy for Auckland, we modelled what would happen if we could incentivise a shift in vehicle occupancy from the current 1.4 people to about 1.7. That is, to incentivise a shift demand.

The impact was massive. In fact, we worked out that to achieve the same impact on network performance through conventional supply side interventions, we would have to build more than another 20% capacity on the road network. That capacity would cost tens of billions of dollars.

So, the prize from shifting demand - from embracing this new paradigm - would be the ability to re-think investment strategies, possibly avoiding the need to extract billions of dollars from tax payers and businesses in the future.

Now, I suspect there are many of you saying to yourselves, that is all well and good for the big cities, but those benefits won't come to smaller towns, or apply to rural environments. And you may well be right. I agree that these benefits will be much harder to capture outside of the big cities.

This is why a longer term transport investment strategy may well require very different thinking about how you support continued economic growth and productivity in regional Australia, compared with the big cities.

In any event, we may need to think very differently about the way we plan and allocate funding if we are going to both seize the opportunities I have spoken of, but also if we are to avoid their unintended effects. I think, governments and councils will all need to work together more effectively to manage the next paradigm shift in the system.

THE PLANNING AND INVESTMENT SYSTEM

This brings me to how we might think about planning, and the what is needed to support sound investment choices.

I mentioned earlier the importance of thinking of transport as a system. It strikes me that sensible choices about the system are only possible if there is a high level of collaboration and alignment between the various stewards of the system.

I will stick with a more conventional example here; that is, how we might improve the performance of key freight corridors. These corridors may well pass through the jurisdiction of several councils. Without a means of building, say, a regional view amongst these councils, it is difficult for me to see how wise choices can be made about how to best invest public money in that corridor.

This is where the land transport funding system that I have overseen in New Zealand for the last eight years provides, I think, a useful model for you to think about.

The New Zealand land transport planning and investment system is, I believe, a quite elegant and effective system. It has been designed to allow national and local government to work together to build an aligned view about how to best invest, currently, \$3.5 billion a year in transport infrastructure and services.

I want to explain how it works.

First, the system is designed around the fact that central and local government are co-investors in transport, and so there needs to be a way of building an aligned view between them about priorities, and about investment decisions.

Second, the system is designed around a hypothecated fund – what we call the National Land Transport Fund. The fund provides a high degree of certainty about the level of funding that is available for investment, over at least the next decade.

This certainty removes the incentive for everyone to want to be at the front of the queue for money, and for a level of political consensus to develop about the highest priority regional, and national, projects.

It also supports a more consistent and disciplined approach to investment decisions across the country.

Let me explain this in more detail.

(SLIDE 8 – NLTF)

The National Land Transport Fund has all the transport taxes collected by the government hypothecated to it. This includes Petrol Excise Tax, Road User Charges (which in New Zealand are mass and distance based charges for diesel vehicles), and all vehicle license fees.

As I mentioned this generates about \$3.5 billion per annum for investment. In addition, local government invests about \$1 billion from ratepayer sources, but this does not go into the fund.

The fund is used to support nationally delivered functions – for example, national highways investments, and road policing. It is also used to co-invest, with local government, in such things as local roads and public transport.

(SLIDE 9 – GPS picture)

To manage this fund, and to guide investment decisions, every three years the government reviews and releases what is known as a Government Policy Statement on Land Transport – typically known as the GPS. The GPS signals the overall objectives and priorities for the use of the fund, including funding ranges for each of the main activities to be funded over the next six years. It shows, though, the expected level funding available for the next 10 years.

I should be clear about one thing; the GPS does not specify particular projects that will be funded. These are determined through a joint process with local government.

(SLIDE 10 – NLTF)

Each region has what is called a Regional Transport Committee. This committee comprises representatives of all the councils in a region – often the Mayors choose to sit on this committee because transport related costs are such a high proportion of some council's expenditure. There is also a representative from the New Zealand Transport Agency on that committee.

The Transport Agency is the government's arms-length agency that is responsible for managing the fund, and making final project investment decisions.

These regional committees are tasked with developing a regional transport plan that shows the prioritized transport activities for a region for at least 10 years. These plans must be issued every 6 years, are reviewed every 3 years, and they must align with the GPS.

This process not only requires the councils in a region to come to a shared view about the priorities across the region, but also the Agency must convince the local councils in that region that their projects should be a priority.

This process of building up a regional plan is a significant feature of the system. It requires strong leadership if councils are to successfully work together to develop an aligned view about the critical transport issues in a region.

Once regional plans have been developed, the Transport Agency is then responsible for building up a National Land Transport Programme. This programme effectively consolidates and prioritises all the regional plans.

Now, the Agency can only put projects into that plan that are already incorporated in the regional plans. This is another important feature of the design, because it incentivises everyone to ensure the regional plans are sound and complete.

Once approved by the Transport Agency Board, the National Land Transport Programme establishes the priority order of all the projects, and the investment programme across the nation, for the next three years. Projects that are not on this programme cannot be financed from the fund over that period.

The decision to commence funding any of the projects on the programme is however only finalised by the Transport Agency once they have met all the investment conditions. To this end, there is a common investment and assessment framework for all projects that are funded.

Now, the system is by no means perfect, and not every region will be happy with the final programme. In the end, there is still a limited amount of funding to be allocated, so not everyone will get everything they wanted. Ministers also sometimes struggle with the fact that they don't have decision rights on projects. But the system mostly works very well, for both central and local government, and for other stakeholders.

A great sign of how well this system works is the fact that, over the last 8 years, the taxes going into the fund have been increased by over 40%, and more importantly, this increase has been done with the full support of the heavy vehicle industry, and the New Zealand Automobile Association, representing 1.5 million motorists.

These organisations see that there is a direct link between what they are paying in taxes, and improvements in the transport system. I cannot think of any other area of public expenditure where there have been such increases over the last 8 years, and where tax increases have been actively supported by those who are paying them.

(SLIDE 10 – Future)

I haven't turned my mind too carefully to how such a system could be designed for an Australian context with Commonwealth, state and local government in mind. But it is worth thinking about how you would design a system that:

- Recognises the need to build a more strategic and aligned view about the transport system amongst councils in a region, and with the state and commonwealth governments;
- Provides for potentially different strategic approaches between large metropolitan and rural areas;
- Creates the right incentives to optimise investments for the system as a whole; and
- Embraces the opportunities presented by emerging transport technologies.

In closing, I hope I have given you some food for thought, not just about the future of transport and mobility, but also why these and other trends make it increasingly critical to think differently about how we manage investment decisions for cities, smaller towns and rural areas.

I also hope that I have got you thinking about the importance of having a regime that can build alignment between councils, and between the different spheres of government in Australia, especially with the sort of changes I think we can expect in the next thirty years.

Thank you.