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TRANSPORT AND PUBLIC WORKS COMMITTEE

Members present:

Mr SR King MP (Chair)
Mr CE Boyce MP
Mrs JR Miller MP
Mr BJ Mellish MP
Mr TJ Sorensen MP

Staff present:

Ms D Jeffrey (Committee Secretary)
Ms M Telford (Assistant Committee Secretary)

PUBLIC HEARING—INQUIRY INTO TRANSPORT TECHNOLOGY

TRANSCRIPT OF PROCEEDINGS

MONDAY, 25 MARCH 2019

Brisbane

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The committee met at 9.36 am.

CHAIR: Good morning. I declare open the public hearing for the committee's inquiry into transport technology. I would like to acknowledge the traditional owners of the land upon which our parliament stands. My name is Shane King, member for Kurwongbah and chair of the committee. The other committee members here with me today are: Mr Ted Sorensen, member for Hervey Bay and deputy chair; Mr Colin Boyce, member for Callide; Mr Bart Mellish, member for Aspley; and Mrs Jo-Ann Miller, member for Bundamba. Mr Robbie Katter will sadly not be with us today.

The committee's proceedings are proceedings of the Queensland parliament and are subject to the standing rules and orders of the parliament. The committee will not require evidence to be given under oath, but I remind witnesses that intentionally misleading the committee is a serious offence. You have previously been provided with a copy of instructions to witnesses, so we will take those as read. The proceedings are being recorded by Hansard, and you will be provided with a copy of the transcript. To assist with clarity, please identify yourself when you first speak and speak clearly and at a reasonable pace.

The purpose of today's hearing is to assist the committee with its inquiry. Media may be present and will be subject to the chair's direction at all times. The media rules endorsed by the committee are available from committee staff if required. All those present today should note that it is possible you might be filmed or photographed during the proceedings. I ask everyone present to turn mobile phones off or to silent mode. I also ask that if witnesses take a question on notice today they provide the information to the committee by 4 pm on Monday, 1 April 2019. This hearing is the sixth hearing the committee has held for the inquiry. Information about the hearings and the inquiry is available on the committee's web page.

GRADY, Ms Sybilla, Policy Advisor, Engineers Australia

HARRIS, Ms Susan, Chief Executive Officer, Intelligent Transport Systems Australia

REARDON, Mr Gerard, Chair, Transport Australia Society Queensland, Engineers Australia

STANFORD, Dr Jim, Economist and Director, Centre for Future Work, Australia Institute (via teleconference)

CHAIR: I now welcome representatives from Engineers Australia, the Australia Institute and Intelligent Transport Systems Australia. Thank you for your attendance here today. Would you each like to make a short opening statement?

Ms Grady: I am a policy adviser with Engineers Australia. By way of introduction, Engineers Australia is the peak engineering association in Australia. We have about 100,000 members. We are constituted by royal charter. It is our centenary year this year, so 100 years ago we were constituted, and our charter is to advance the science and practice of engineering for the benefit of the community. I was going to introduce Gerard, but I may leave it to him. Gerard is a primary contributor to our submission. He is the Chair of Transport Australia Society Queensland and a member of our national committee.

Mr Reardon: We are delighted to be here. As Sybilla was saying, I am a transport planner and traffic engineer with over 30 years experience. I am a director of a specialist transport consultancy MRCagney. I am an office bearer within Engineers Australia. I currently sit on the national committee for the Transport Australia Society, which is a technical society within Engineers Australia. I chair the Queensland committee. My background is a degree in engineering and a masters in transportation engineering.

Ms Harris: I am the Chief Executive Officer of Intelligent Transport Systems Australia. We are delighted to be here at this inquiry as a witness. ITS Australia are a member based, not-for-profit organisation. We are really pleased to be here contributing to this important inquiry. We represent over 150 organisations focusing on the transport and technology sectors. We represent organisations Brisbane

across government, industry and academia. Our mission at ITS Australia is to support both the development and the appropriate deployment of advanced transport technology that aims to secure safer transport and more efficient and more sustainable transport solutions.

CHAIR: We have Dr Stanford on the phone. Would you like to make an opening statement?

Dr Stanford: I am the Economist and Director of the Centre for Future Work, which is a policy research institute affiliated with the Australia Institute. We focus on issues of labour markets, work, employment and technological change. I appreciate your flexibility in allowing me to join the hearing today via teleconference.

CHAIR: We will now go to questions.

Mr BOYCE: In regard to technology, it seems to me that the larger urban areas will benefit largely from future technology, whereas people in remote areas throughout Queensland will be severely disadvantaged given the fact that Queensland is a great big state. How would you envisage that technology spreading out of the larger urban areas as far as all of this new driverless technology et cetera is concerned?

Ms Harris: I would be really pleased to respond to that from a transport technology perspective. I think we face a real crisis in our rural areas with regard to road safety and the incidences in our rural areas. There is an absolute opportunity for transport technology to play a role in improving safety in our rural and remote areas. This is not about a solution that is just for the wealthy city folk. This is about a solution that can really enhance safety for rural and regional people.

We have vehicle technology that can help monitor driver alertness and to make sure that drivers are reminded to stay alert and awake. We have lane-keep assist technology that can help on long drives to keep drivers safe. We also have connected vehicle technology that can assist particularly at rail-crossing intersections in remote and rural areas as well as in city areas. Safety is an absolute imperative. I think we can bring great benefits into the bush with this technology.

When we look more generally at some public transport solutions around mobility as a service, I think there is a great opportunity in our rural centres to really enhance transport solutions with a layer of connectivity that can help to improve transport accessibility more in regional centres rather than in remote rural areas. In regional centres we can provide a layer of connectivity that can help rural people to access transport and get to jobs and get to the community services that they need.

Mr BOYCE: How would this technology, for example, apply to a dirt road? There are plenty of them out there, I can assure you.

Ms Harris: Absolutely. I think we need to be mindful that it is not all technology for everywhere. We are not anticipating that we will have highly automated driverless vehicles driving down a bush dirt road. Connected vehicle technology between two vehicles—which can detect an approaching vehicle or trees that might be in the way or a heavy vehicle might be blocking the view of a driver or a train—will work equally well in the bush as it does in the city. That has the potential to alert a driver that there is a vehicle coming and there is an impending collision. It can either warn the driver or in the next version of technology it can actually bring the vehicle to a halt.

Mr SORENSEN: I had a question asked of me yesterday and I did not know how to answer it, but you may be able to help me. If one of these electric cars with the big batteries has a smash and they catch on fire and the lithium starts burning, how do we control that with technology, because lithium creates its own oxygen and you cannot put the fire out? That was a question I was asked yesterday at a meeting and I would like the answer.

Mr Reardon: If I could first respond to the member for Callide's question. It is a very good question. I will be open with the committee: my brother owns a vet practice at Warwick and I have clients with property and developments up at Biloela in all parts of the town. I come from Cunnamulla myself, so I understand the division. With the uniqueness of the state of Queensland we have a concentration of people in the south-east, yet there are rural requirements as well.

Following on from what Susan from ITS Australia said, I would not necessarily get too focused on the role of autonomous vehicles in regional areas, bearing in mind that a lot of research says we will not introduce autonomous vehicles to any level of detail until post 2050, even in urbanised areas such as Brisbane city. I would be looking at what technology can do to improve road safety. One thing we have with rural areas is the tyranny of distance. You need to provide pretrip information to people. RACQ, with the state government, is already trying to use technology to provide that information so that decisions can be made and their economic productivity is maintained.

The other area is asset management. We are overstressing our bridges and rail lines. The use of technology in rural areas is there, but I would not necessarily be focused on automated vehicles. As Ms Harris also alluded to, technology can help with fatigue management and road safety, particularly in the area of freight. There are certainly many opportunities we need to progress further to see how technology can help productivity and benefit those in the rural areas.

To address your question about lithium batteries, I would not have an answer to that specific question. I would suggest that, as we have said in our paper, the future is electric. The future is also looking at a shared service that is also possibly connected and automated. What we mean by electric is that you only have to look around and a quick Google search will show you that many countries such as Japan, China and Taiwan are moving away from fossil fuels. There are a whole host of them. This country needs to head towards an electric future, as we said in our paper, and doing it in parallel to make sure that the source of that energy is not necessarily from a fossil fuel power generator. It is a double-edged sword. That can be achieved, and there are many papers and discussions on that.

The actual management of a lithium battery fire is something that will need to be considered. I am not a mechanical engineer. Engineers Australia is a collection of diverse engineers, but I am sure that is an issue that will need to be considered.

CHAIR: Dr Stanford, do you have any comments to add about the use of technology, the use of vehicles in rural areas and the concern that was raised by the member for Hervey Bay about lithium battery fires?

Dr Stanford: As an economist, I will pass on that. My expertise is not about the technology of lithium fires. I have a hard time putting out the fire on my kitchen stove when I cook dinner in the evening, so I am the wrong person to ask about that.

In terms of the impact of new transportation technologies in rural or regional areas, I think there are some applications that could actually be better suited for regional areas, certainly those involving long-distance transportation corridors, where you could have more of an opportunity to create more of a controlled environment. It is more in the urban areas where the ability of these new automated transportation systems to respond to unpredicted stimuli will be the bigger challenge. I would not assume that these new technologies are less applicable. In some cases they may be more applicable to regional communities. That makes it all the more important, given the economic challenges already facing regional communities, that we put in place adequate training, adjustment and transitional training for anyone whose job is affected by it.

Mr SORENSEN: Getting back to my question about lithium batteries, I am a bit concerned about it. I watched that *Air Crash Investigations* show, and a Russian cargo plane went down because they could not put a fire out in the plane. If you read the conditions before you hop on a Virgin flight, you are not allowed to have lithium batteries stored in the cargo hold of the airplane. You can have them in your luggage and you can carry it on in your pocket, but you are not allowed to put them into cargo. I was chastised recently about that because I had one of those batteries that you use to charge up your phone and they would not accept it. I had to get it out of my luggage and put it into my personal carry-on luggage. That question is being asked a bit around town.

CHAIR: Thank you for that comment, member.

Mr MELLISH: Mr Reardon or Ms Grady, in your submission you mention a bit about mobility as a service. Can you elaborate a little bit on what you think the next steps are in terms of framework or pushing that forward as a concept?

Mr Reardon: For those who may not be clear, mobility as a service is a framework. Essentially, it brings together the seamless provision of services, information, bookings, payments and customer relations between transportation modes. It is quite new in its development. There was a conference a couple of years ago that looked at various levels of topology of mobility as a service. Some may say that when an Uber service provider or government provides a journey planner on a phone as an app, that is part of a mobility as a service. There are different components of it. Mobility as a service is really heading towards one platform that allows users to interface with one platform which oversees the provision of all of these services.

Where we see government's role is really moving from being a service provider to more of an enabler, so how the government actually provides that information. They may provide that information to that platform but the end user is making a choice. What we do know in an electric and shared transportation system is that people are becoming mode agnostic. They will choose the quickest and cheapest path by various modes in that set of circumstances. Whether you are in Biloela, Ipswich or

down at the heart of the Gold Coast, you will choose different modes. Currently, the role of the government is to provide public transport services. In the future you may find that you are just looking at providing information, and the decisions and the choice of using those services is made through the service provider.

Currently there are three broad models of MaaS being looked at across the world, and we talked about Finland and other areas in our submission. You could have a public entity model, you could have a public model where it is just publically delivered, or you could have a PPP. What we are concerned about when we look at MaaS being delivered is you can see with other technologies that come on board the idea of a service provider having that sort of overarching framework—or control of that framework—could slant the commercial focus towards the richest pickings. Whilst we see role of government as an enabler, it is also to ensure social equity because it is to ensure we get that balance. We would encourage the government to keep moving forward.

The Queensland Department of Main Roads is already working down this path. It is trying to understand how it will deliver mobility as a service in the future. They see that it will change how they do business. The government certainly has a role in ensuring we get an equity of balance in the right model for Queensland.

Mr MELLISH: Previously in South-East Queensland you had to get a ticket if you caught the bus, a different ticket if you caught the ferry and a different ticket if you caught a train. A lot of urban centres are moving towards the same integrated ticketing process. Do you see that as a good precursor towards moving more towards MaaS?

Mr Reardon: Yes. The way MaaS has been represented to us and what we are hearing from our colleagues is that, like the Whim system in Scotland or Finland, everything will be on your phone. Whether you are going from one mode, to another mode to an Uber driver does not really matter because it is all coming through the one platform or the one technology. Yes, moving towards integrated ticketing systems is certainly heading in the right direction, but it will get more sophisticated.

Professor Rod Tolley from Walk21 said that if you were born in the fifties and sixties you were told, 'Don't drink and drive,' so people like me decided that we should not drink because it is a safety imperative. If you were born post 1995 you were told, 'Don't text and drive.' We incorrectly assumed people would give up texting, but they did not. They are wedded to technology; they will forego the car. As I said, they are pretty much mode agnostic, and that gives them the flexibility of what they want.

Mr MELLISH: Do you see the government having a role in that going forward? We will still need to subsidise certain forms of transport. If you were going to catch a train, on a cost recovery basis from Logan to Brisbane you would spend \$30, I suppose.

Mr Reardon: There certainly is a role for government. We would not see the government as a framework provider: we would see it as an enabler and provider of information for others to disseminate to the user.

Mr MELLISH: In your submission you mentioned hydrogen. Can you elaborate on what you see as the next step towards increasing the uptake of hydrogen and how that compares and contrasts with electric vehicles as a fuel source for personalised transport?

Mr Reardon: That is a very good question. This paper, as we said before, was put together by a range of people within the committee I chair. In terms of what we are seeing with hydrogen production, the message is that it provides an opportunity as a fuel source. If you refer to the paper on hydrogen strategy by Australia's Chief Scientist, he produced a framework for moving forward. We do not see it necessarily as an either/or: we see them as complementary measures. Basically, the message is that diesel is dead and we are moving away from fossil fuels.

Mr MELLISH: I have a question for Dr Stanford, but we lost the phone connection.

CHAIR: It is funny that technology is beating us. Are there any other questions?

Mr BOYCE: You mentioned things being on your phone and this kind of technology. It seems to me that as technology advances we have not even adequately covered the technology that we have as far as implementing it and getting out there. For example, as far as telephones and internet service go, there are lots of places that do not even have that yet. How do you envisage new technology being applied when we have not adequately covered the old technology?

Mr Reardon: Can I just get clarity on that question? Are you suggesting that we do not have enough infrastructure to support the knowledge that we currently have available?

Mr BOYCE: That is correct.

Mr Reardon: I can answer, but would you like to answer that first, Susan?

Ms Harris: From my point of view, I think it is really important that we consider the unique Australian context. We have challenges in this space around the geography of Australia. We need to be mindful of doing trials and doing our own work in Australia, not just relying on what happens in North America or what happens in Europe because of the unique geography that impacts on things like mobile coverage and GPS positioning. I think there are solutions that can start to fill those gaps. Just because we cannot have the benefits of this technology in all parts of Australia does not mean that maybe we should not have them in other parts as well. I think technology is a real issue.

Mr BOYCE: I am not suggesting that we do not have it; I am suggesting that some sectors of the community are going to get left behind in the technology race.

Mr Reardon: We need to ensure that it is all covered. We are all familiar with the NBN and the rollout of landline technology fibre systems for connectivity. The question then comes to low-orbiting satellites and what they can do and those opportunities. You can get connectivity in terms of your intelligence by using different types of mechanisms.

As we all know, Australia's challenge is the tyranny of distance. We are a large country. I always use the words that we need to come up with solutions that are best fit for purpose. It is a balance of the demands, the concentration of people and the expectation of usage. By no means does that diminish the fact that it is important—in fact, it is critical—particularly in low-density areas of population that we need to have that ability.

For instance, you can see it with the Royal Flying Doctor Service—the ability to get that information and use that technology, not from a transport perspective but from a health perspective. Our position from Engineers Australia is that we need to ensure that we address that issue, we ensure there is that ability for people to have access to technology and also understand the technology—we do not create a digital divide—and also that we implement infrastructure that is cost effective in terms of its requirements.

CHAIR: Thank you. The member for Aspley had a question for Dr Stanford on the phone. We will ask it on notice, because we cannot reconnect with Dr Stanford because of our technology here. If you could just read out the question and then we will get it to Dr Stanford.

Mr MELLISH: Dr Stanford mentioned in his submission about negotiating technological change and how workers and their unions should be notified of company plans for new technologies. I want him to elaborate on that a little bit and what he thinks is the best way to do that going forward.

CHAIR: Thank you for that. Thank you everyone.

Ms Grady: I wanted to comment briefly on the last question. In our submission we talk a bit about the need for government to regulate in consideration of a mixed fleet for transport. What do we do as we move towards technology? What are the risks associated with having driver vehicles and self-driving vehicles and then moving to fully automated vehicles? We talked about that. I just wanted to say that that that is a consideration.

CHAIR: Thank you for that and thank you for your interest.

DAVIES, Mr Blair, Chief Executive Officer, Taxi Council of Queensland

HANDLEY, Ms Elizabeth, President, Brisbane Residents United Inc, Brisbane Residents United

CHAIR: We now welcome representatives from Brisbane Residents United and the Taxi Council of Queensland. Elizabeth, would you like to make an opening statement?

Ms Handley: Yes, I will. Good morning, chair and committee members. I represent Brisbane Residents United, Brisbane's peak body for community resident action groups. I have been involved in local community work for over 20 years and we thank you for this opportunity for the presentation to the Transport and Public Works Committee.

The potential economic rewards for new transport technologies are huge. This is an issue that will lead to leapfrog technologies and new ways of using transport. These new technologies need a holistic approach from government that includes a true cost-benefit analysis of their implementation. Cooperation between the three levels of government means that funds are not spent on stranded assets. For example, we question the Coomera Connector road, which will add another six lanes of traffic parallel to the M1, which means that we are going to end up with 14 lanes of traffic in certain areas of that road. We think that the money for the Coomera Connector should be spent on additional rail lines or at least more passenger rolling stock for more frequent services. We think that the community disruption, pollution, noise, loss of habitat and loss of homes make the Coomera Connector a bit of a questionable choice.

Driverless vehicles will lead to a new concept of public transport—a hybrid of almost public and private transport—that will increase the use of public transport and enable the elderly and the disabled to stay in their own homes for longer. We believe that many people will no longer even need to own a car. For that to happen, public transport must be affordable, clean, frequent, reliable and seamless in transition from one mode to another. Local area movements should be pleasant and easy, using various modes of human and electric powered transportation. What we mean by that is that our town planning has to take into account that, if you want people to be walking, you need tree lined streets. If you want people to be moving around a local area in a pleasant fashion, you need to provide a pleasant environment for them to do that. That means that it is a benefit for health as well.

We believe that the train network should be expanded, particularly to include regional centres. The example I am using is Warwick, Stanthorpe and Boonah. I believe that a road and train tunnel through the gap would enhance the potential growth area of that, but I am using that as an example where sometimes we need to look at various areas and look at them in a new way. The way that we have spent money servicing those areas in the past are not going to be the best way for us to spend money servicing them in the future.

I think tourism is one of Queensland's most important economic drivers. It is a vital source of revenue in regional areas. Queensland is a vast state and the distances to major attractions can be daunting for tourists. From Brisbane, the Whitsundays are 1,100 kilometres and Cairns is 1,682 kilometres. On a train travelling at between 300 and 400 kilometres, you could be in the Whitsundays in approximately three to four hours. You could be on the Sunshine Coast or the Gold Coast in half an hour. This would make train travel often a more convenient alternative to air and road transport. I tell you that the research from overseas with that is that you do not get fewer people travelling by plane; you get more people travelling in general, because they have a choice of mode. That gives them options. You end up with more tourists making those particular trips.

We think that trackless trams should be looked at as a replacement for expensive light rail. Those being trialled in China, Sydney and Perth are pollution free, quiet, flexible and need only sensors painted on whatever road they travel. They carry as many passengers as light rail. Because they do not need hard rails and overhead electric wires, they are 75 per cent cheaper than light rail.

We already know that self-driving cars are being trialled. It is estimated that, by 2040, 95 per cent of vehicles sold will be fully autonomous. The self-driving vehicle will affect many industries—trucking, delivery, auto insurance, energy companies, auto suppliers, dealerships, parking lots and ridesharing services. Those services certainly have a lot to lose by this, but society as a whole will be a big winner in that we will have fewer traffic accidents, a reduced reliance on fossil fuels, more affordable—we hope—transport options and more free time for people. I drove up from the Gold Coast this morning. It took me two hours to get here.

One of the things that I think we should look at is improving working from home rates, working from community hubs, internet conferencing and that sort of thing. We should be creating new Queensland jobs in research and development. That includes things like batteries and renewable energy technologies. We believe that if we plan and implement this properly, we will have low-cost transport systems that work for our state and enable us to adapt to changes nimbly and to our economic and social benefit in the future.

CHAIR: Thank you very much for that. I appreciate it.

Mr Davies: Thank you. We provided a submission. From the taxi industry's point of view, we are watching this space with great interest. We note that many of the commentators talk about autonomous vehicles either being out in the way distant future or they are relatively imminent. We take a relatively agnostic view. We want to be ready when they come. We think, though, that many of the folk who think they are going to be decades away are probably missing the learning of the smartphone. The smartphone developed and took off. These days we do not even want to use the old versions of the smartphone. We want only this current generation or the one before it and we cannot live without it. We think that autonomous vehicles are going to be in a similar vein.

Along with autonomous vehicles we see the issue of electric vehicles. They are going hand in hand. We see some of the submissions made to government, particularly the governments in Australia, are just crazy in that space. I remind you of what happened in the case of the hybrid vehicles. Toyota had a plan to produce Toyota Camry hybrids in 2006 in Australia. The demand in the Northern Hemisphere swamped them. We did not see hybrid Camrys starting in Australia until I think about 2009, maybe 2010. Australia is not going to be driving this agenda. In fact, we need to be a good surfers. We need to work out where the wave is and be ready to jump on it when our opportunity arises. That is a good thing because, in many ways, some of the early adopters of this technology might well experience problems and we can learn from that. Rather than spending huge amounts of public money on trials of the technology in Australia, we think that it would be a smarter move for us to be positioning ourselves to learn from every other person's trial and spending our money that way and be judicious in the way we encourage things to happen.

If you have a look at Australia's use of Australia auto gas, Australia led the world in the use of auto gas. It had very little to do with government planning for that to occur. In fact, the government created no excise on LPG. That made it cheap. Industries like the taxi industry jumped on board, because it was to our commercial advantage. We ended up with an efficient taxi service, because we were saving money. We also ended up with a green taxi service because, running vehicles on LPG was significantly greener—a lower carbon footprint. The government did not really help this thing along in a great way, but it did in another way. It created the environment in which the private sector could take advantage and that we did. At one stage I think we had two per cent of the vehicles and we had 20 per cent of the consumption of LPG.

In the case of LPG, it is a little bit like electric vehicles when you think about it. One of the troubles for some people investing in electric vehicles is, 'Will I be able to take that car on a family holiday, or to some distant destination and be able to use it?' You need to have the infrastructure around that. The LPG industry sold LPG to the taxi industry. Our vehicles worked in concentrated centres. As we promulgated that out in a vast state like Queensland, you ended up with the facilities so that people can travel around the state in LPG vehicles and take advantage of that technology. I would suggest that, if the state government were looking at how it could advance electric vehicles, it could take advantage of that.

I will make one last comment. I heard there was an issue about MaaS, Mobility as a Service. I advise that mobility as a service as a concept has been around for an awful long time now. I was very enthusiastic about it seven or eight years ago and I have watched the concept not come to fruition for a whole range of reasons. One of the reasons is that most of the people who are peddling MaaS are looking to make a profit out of it. It is a little bit like *Lord of the Rings*. They all want MaaS to be around their app or their platform. MaaS as a concept does not work that way.

What can governments do about that? In the case of the Queensland government we have this thing called TransLink, which has control over rail, ferry and buses. This is an old view of a utility system. A century ago when people were looking at connecting water to people's houses which was a tremendous thing they were replacing wells in the middle of town—wells that people had to go to. These days if you want to catch a train you have to go to the train. It is a node-to-node transport system. We need some smart thinking along with the technology and realise that people want to go from wherever they are to somewhere else and it is not a train station and it is not a bus station. MaaS is actually the way to do that.

The government has a whole host of controls over most of the modes but it does not have the last mile. One of the things that the government could do is look at the last mile. I encourage you to have a look at the *Four Corners* report of last week. If you think that the solution is for the government to be dealing with companies such as Uber when in fact you have one of the best taxi industries in the world—we now have spare capacity—we would love to partner up with the government in providing that last mile solution.

CHAIR: Thank you very much. We will go to questions.

Mr BOYCE: Mr Davies, as we move to automated technology and electric vehicles and driverless cars and all of those sorts of things, where do you see the taxi industry fitting in with that? Do you see the taxi industry buying hundreds of automated vehicles and calling them Yellow Cabs, for example? Is that where we are headed? Would you comment on that please?

Mr Davies: Exactly so. In fact, about 50 per cent of the cost of providing a taxi service is the labour cost of the driver behind the wheel. If there is technology which allows the service to be provided without that cost, we will have to embrace it or we will be consigned to the dust bin because the commercial pressures will force us into that space. We do think that there is a role for drivers. In the transition phase we think that there will be many consumers out there who will be worried about getting into a vehicle that is driverless, so they will take advantage of being able to use a taxi service to experience the technology. We do think that there are transport services where people need some care and assistance. For example, our wheelchair accessible service at the moment generally has to be provided with somebody who is assisting.

What we are looking at in terms of jumping on this wave is how do we as an industry help our drivers transition from the role where they are in charge of a vehicle to where they are providing additional services? I think the point was made before that, when you move to these autonomous vehicles, you may well see fewer privately owned vehicles and more vehicles out there in the public space being re-used. That is one of the things that people need to be able to do. They need to be able to put their car into that system and know that when it comes to pick them up in the evening it is going to be clean, it is going to be fuelled up and all of those sorts of things. We will need to adapt. Absolutely, we will be on this.

Mr BOYCE: I can see public transport becoming an essential service and the public will demand that it be held in the hands of the public rather than private industry.

Mr Davies: I suggest that you think back to the way the smart phone system has worked. There was no government getting out there and saying that we need to put computers on people's hips. In fact, it worked better when the private sector was providing it. I would suggest to you that, in the case of autonomous vehicles, they are going to reshape public transport.

At the moment there is this prevailing view that a train is more efficient and more environmentally friendly than a bus and a bus is more environmentally friendly than a car. There used to be some statistics at Ipswich, Jo-Ann, where the local bus service was carrying 2.3 people on average per journey and the taxi service had 2.4 people on average in a small vehicle. Environmentally, it is way cheaper to be running a small vehicle than a large vehicle.

In terms of dollars, it is way more efficient to be running a small vehicle than a 60-seater bus. One of the things that happens with autonomous vehicles is the connectedness of these vehicles. You can run small pods that connect up together, run as a platoon down the highways and then when they get to common areas they fragment off and take people directly to their door. A lot of the investment that is going on in public transport in terms of the mass transit services may well become completely redundant in 20 or 30 years time. The wise decision-makers will be making decisions that prepare for that now, as opposed to realising it too late in the piece.

You have probably been advised of this already, but we understand that many of the infrastructure decisions around roads are made on a 20-year or 25-year time horizon. I suggest to you that within 20 years things like autonomous vehicles are likely to be in play. Therefore, having good road paint is going to be more useful and cheaper than having extra lanes on a highway. From a Taxi Council point of view, we commend this committee for thinking about these things now because you could potentially save an enormous amount of money for the public purse.

Mr SORENSEN: Do you see the future of drones coming in as well?

Mr Davies: Do you mean like flying taxis?

Mr SORENSEN: Yes.

Mr Davies: Yes, absolutely. They will certainly be delivering parcels and those sorts of things. It gets really interesting because it is one thing to be on a congested road but it is another thing to be in a congested airspace. I think that is the scary part of all of this. To be in that congested airspace in a driverless electric drone is particularly interesting.

I think Elizabeth made the point before about high-speed rail. High-speed rail will be very competitive, we believe, in that short-haul arrangement—perhaps from Brisbane to the Sunshine Coast or maybe to Rockhampton. I am not sure about the Whitsundays. We do think that the drones will be a factor. I would suggest that the drones look really good and when you have a video of one they are really exciting. On our assessment they are likely to be for the privileged and therefore out of the range of the masses in most applications for the foreseeable future at least.

CHAIR: I was visualising George Jetson. We have had this discussion about drones before. I know that the member for Hervey Bay would love to come down from Hervey Bay in a drone. The concept is there.

Mrs MILLER: Elizabeth, thank you so much for your submission. Town planning in relation to this issue is crucial. I had a situation in Springfield, to give you an example, where they put in the railway line, which was very good, but the whole thinking and planning behind it was completely stuffed, to be quite frank. It is a suburb that has a lot of young families and the idea was that everyone would walk to the railway station. I kept on saying that I was a young mother once and you have to drop kids at childcare centres and kids at school. You are supposed to walk with a pram to a childcare centre and then walk to a school and then walk to the train station.

Ms Handley: In 35 degree heat.

Mrs MILLER: Yes.

Ms Handley: That is what you have to do it in—35 degree heat.

Mrs MILLER: I would like a comment on that because most planners do not actually talk to people about the way they live.

Ms Handley: This is one of the things that Brisbane Residents United are about. What I would ask you to bear in mind is that, when you are costing transport and you are looking at the various options, you need to look at it in a holistic manner. It is about setting up the right environment in the local area. For example, we think about footpaths as not particularly important. In fact, when you are pushing a pram, a footpath of the right width that allows a pushbike to go past you or allows you to have a child walking beside you or whatever, in a tree lined street, makes the difference in being able to take a child to the local shopping centre or to wherever you want to go. We have not given enough consideration to that. I would say to you: go to some of these new developments where you will not see a tree for blocks and blocks and blocks.

Mrs MILLER: Come to my electorate. You will see entire suburbs without a tree.

Ms Handley: Yes, and there is this much space between the houses. We are looking at transport options for those particular areas. Unless you make the streets or the bike paths or whatever you are going to use—there is a whole range of other types of transport that may not necessarily be mass transport that people may get into if you provide the right environment for them. Think about the fact that years ago we did not have bike paths and look at how heavily those bike paths are used now. They actually serve two purposes for government: they take people off the road, so that means you are not replacing that infrastructure as frequently; and you are encouraging people in a healthy exercise, so they are not then a bigger drain on the health department.

We encourage our elderly to be active in the community. One of the advantages I see with autonomous vehicles is that you will have a situation where something will seat, in my imagination, five or six people and it would do a very small run within a half an hour period. It would pick up five or six people and deliver them to the place they want to go. That would allow the elderly to get out of their houses. It would also mean that just as you now travel on public transport with other people—one of the huge issues in our society now is loneliness—you would actually be in a vehicle with somebody else, even if it is for a very short period of time.

There are a lot of people who, if you said to them, 'We can guarantee you are going to be picked up here and delivered there within a half an hour period of time,' would say, 'I'm happy with that.' Other people might say, 'I want to go from hither, thither and yon,' and I think taxis in that scenario are excellent—I want to start here and I want to be there and I want to be there within a 15-minute period.' When you are looking at other ways of moving people around, you need to take

into account the social effects that transport can have for people. A family friend was driving until she was 99. I want you to think about that. We found it scary but she was given a licence. They want to be out there. They want to be involved in the community. For a lot of them, the day their driver's licence is taken away from them they almost feel like an arm is cut off.

We have already seen the importance of designing new transport systems taking into account the disabled and people who have prams and other bits and pieces. The lovely thing about computers is that they can do the computations that we are not able to that would enable things like knowing that when you go to pick up Mrs Smith the type of vehicle that has to be sent to her has to be something that she can get in and out of easily. You can have that sort of detail on people.

I do agree with Blair. The way we saw transport working almost was that there was a local version of transport that then might have taken you to an area where you did your longer distances. We are actually saving roads for the people who need to be on them—for example, tradesmen and people who are moving around and making the most of things.

Mr MELLISH: Mr Davies, I was interested in your comments around roads built now and the need to be planning for the next 20 and 30 years and what they will be used for then. Do you think this is something that needs national standards? Is this something that COAG should take up as a body of work—that is, having a bit of consistency across the states when we are building roads for the next 20 or 30 years?

Mr Davies: Yes, the National Transport Commission is probably ideally placed to be looking at that. Yes, it is a Queensland issue, but it applies to every state, with the exception that Queensland has a very distributed road network and consequently probably needs to think a little bit harder than say the Victorians in this space.

Mr MELLISH: I liked your example about LPG and how the take-up of that was really led by the taxi industry. I am keen to hear your view on what the biggest obstacle is for a similar uptake of electric vehicles? Is it the cars being manufactured? Is it the downtime in terms of having a taxi on the road? Is it the infrastructure that is there?

Mr Davies: I have one anecdote for you. We had a taxi licence owner up in Cairns decide he was going to put on a Toyota Prius. He went and bought one and put it on the road. There was no local Toyota technician. In fact, they needed to train somebody up. It took them three months to get that technician up and running. Toyota tell us that it was on the back of that taxi—that Toyota Prius—running around, people being able to get in it, the fact that they started putting some infrastructure in there like somebody who could service it that they started to build out the infrastructure. That is a smart way of going about things.

When government throws money at things, chances are it only gets a 20 per cent return or a 10 per cent return on the dollar. When the private sector invests their money in something, they are dead keen to make it work. Consequently, from the government's point of view where you partner up with the private sector and people who are not looking to get a hand out but a hand with then you are going to get better value.

CHAIR: There are no final questions.

Mr Davies: Could I make one final statement?

CHAIR: Yes.

Mr Davies: In the period from 2005 to 2007 the taxi industry embraced the idea of security cameras in taxis. We bought the world's best taxi security cameras. In fact, we had jurisdictions from around the world coming and looking at the specifications that Queensland had developed and the cameras that went into Queensland taxis.

We fast forward to 2018 and what Queensland actually did was mirror what the Victorians were doing. We borrowed their specifications. They had a specification where they said that the cameras needed to be able to record audio but it needed to be turned off. In Queensland we were smart enough to say that they need to be able to record audio and that has to be working.

We now have the crazy situation where the government is saying that all of the security cameras that cannot record audio along with images need to be taken off the road from 30 June 2019 even though those cameras have worked well for the last decade deterring crimes against cab drivers and deterring cab drivers offending against passengers. In our view, this is the wrong approach to

technology. We should be embracing technology for the features it can bring. What we should not be doing is using the heavy hand of regulation to force people who are going through financial distress at the moment to take a piece of equipment that is working fine and replace it with a new \$2,000 piece of equipment simply because this one cannot record audio.

If there is ever an event in a cab where the cab driver is in trouble they use a silent alarm which opens up a one-way communication channel back to their base and they start recording everything that is going on inside that cab. We have been doing it for decades. The message is: when we are looking at this technology, let us look at what it can do and not get so enthusiastic about the bells and whistles and how shiny it is. Let us look at it in terms of how we can apply it to make a difference.

CHAIR: Thank you very much. We really appreciate your time today. I declare this hearing closed. A transcript will be available on the parliament's web page in due course.

The committee adjourned at 10.34 am.