ROAD SAFETY COMMITTEE

Inquiry into vehicle safety

Melbourne—6 August 2007

Members

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Mr I. Trezise	Mr C. Langdon

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Mr G. Liddle, Chief Executive, VicRoads;

Mr G. Mavroyeni, Executive Director, Road Safety and Network Access, VicRoads; and

Mr R. McArthur, Manager, Vehicle Safety, VicRoads.

Mr KOCH—We have Gary, George and Ross from VicRoads with us now. Thank you, gentleman. Before we start I would like to welcome you to the public hearings of our Road Safety Committee. I think it is important that all the evidence taken at this hearing is protected by parliamentary privilege as provided by the Constitution Act 1975 and further subject to provisions of the Parliamentary Committees Act 2003, the Defamation Act 2005 and where applicable the provisions of reciprocal legislation in the other Australian states and territories. Any comments you make outside the hearing may not be afforded such a privilege. I am sure you are probably across that. We are recording the evidence and we will provide a proof version of the *Hansard* transcript at the earliest opportunity. If you see fit and necessary you can make alterations and corrections to that prior to it going to print. With those few words, Gary, as CEO, I assume you will be leading the hearing on behalf of VicRoads with your submission.

Mr LIDDLE—Thank you, David, I will lead off and then George will do a bit and Ross will follow up with some more detail. Firstly, thank you for the opportunity today. We certainly recognise these committees are important too, taking road safety forward in Victoria. They have been very successful for us all in the past. Today we wanted to talk about those five things to you: what has happened with the current road safety strategy; what we have achieved with vehicle safety in the past and leading on to the recommendations that we are making to the committee.

The current *arrive alive!* strategy, five-year strategy, started in 2002, a target of 20 per cent reduction in both fatalities and serious injuries. More importantly it is this partnership between government agencies and the community. One of the successes in Victoria is exactly that, and a very strong understanding of the four players about what their respective roles are. I cannot overemphasise enough how important that has been to our successes here in Victoria. While VicRoads leads the charge with four or five things, clearly TAC, largely with the advertising campaign, police with enforcement and public education and justice about the overall management of the enforcement technology program with speed cameras and the like. It was really successful and something that needs to be protected at all costs would be my view; a key part of what we have achieved here.

It is fantastic to review on what we have achieved. If you look back in 1970 when we were at the stage of effectively three people being killed every day on average on our roads, to today where less than one person is being killed every day on the roads. If you think about that in the context of the overall situation where in the last 10 years we have probably had about a 10 per cent increase in both population, licensed drivers and vehicle registration, and at the same time the road toll has gone down from around 430 a year to 330 a year. I do not think you can underestimate how large an achievement that is for us in the community at a time when the use of the road network is going up enormously, to have achieved that reduction in fatalities is a fantastic achievement and, as I say, largely as a result of that partnership.

If you have a look there have been really key milestones along the way. If you start back in 1970 when seat belts first came in that was at the stage when we had three deaths effectively every day. If you go through that 30 years there are some fantastic achievements of this state in terms of what we have done with road safety, so random breath tests, radar guns, a fairly substantial increase in mobile speed camera operation in the 1990s, but the mass media campaigns and black spot programs more recently to continue to—perhaps the last five or six years has largely been holding our ground but holding our grand in a period when vehicle usage has gone up substantially. It is good sometimes to reflect on those achievements.

If you look at the last five years with a bit more detail, urban default speed limit came in in January 2001 and we all know that has had a substantial impact in terms of reducing pedestrian casualties in those areas; the increased use of speed enforcement; speed limits in high activity areas, particularly pedestrian activity areas, the use of those 40 K speed limits in

shopping precincts school speed zones; then things like alcohol interlocks and random drug testing, again a world first with that random roadside drug testing. As I say from 2003 onwards we are holding our own but we have to find a way of getting to the next magic bullet and hopefully today we can talk about some of those.

Mr WELLER—Coming from a rural area, the figures for that period of time are not reflected in the rural deaths.

Mr LIDDLE—Not to the same degree, Paul, that is right. We will have a quick look in a few minutes at some of those figures. That is the overall picture since the start of *arrive alive!* with fatalities across Victoria. The blue line is the trend line that we needed to hit to achieve that 20 per cent reduction in fatalities. As you can see we have been below it most of the time, currently right on it, but we are about 18 and a bit per cent as we speak today but pretty confident by the end of this year we will be at the 20 per cent reduction. Victorian serious injuries takes a bit of explaining. Unfortunately in 2006 we changed the measurement for injuries in Victoria so while it looks like it is going up, the increase is as a result of having a different measurement for serious injuries from the start of 2006. You can see that now we have a full year of that new methodology, hopefully that downward trend will continue now because we are measuring the 12-month rolling period we have been through a full 12 months, it should continuously decline from now on. Clearly over the next three or four months that should show up.

Mr WELLER—What was the change in measurement?

Mr MAVROYENI—It is more of a reporting format. There is no change in definition of serious injury, it is the police reporting format. As a result of the change in the format it has led to an increase in the number of serious injuries.

Mr LIDDLE—It is electronic reporting now rather than paper based. The definition of serious injuries have not changed.

Mr WELLER—Now that it is electronic more are getting there whereas they were not when it was paper based?

Mr MAVROYENI—It is the format. It is not ticking the boxes or writing in the same information as you used to do. There is a bit of a change to that. The police could perhaps better explain it to you. It is the change in the reporting format, not a definitional change or a methodology, it is the format. For some reason it has led to an increase in the number of serious injuries being reported. Prior to the system change we have had, as you can see, a decline. You can see the decline coming up to the orange bit and with the new system now being implemented we are getting an increase—15, 20 per cent increase—in the numbers. As Gary said, once we have the full year under the new reporting system we are getting back to the reduction trend that we used to see before the change in the system.

Mr LIDDLE—Perhaps, David, we can provide a better description of what that change was.

Mr KOCH—Thanks, Gary, that would be appreciated. Gentlemen, I would like to apologise at this stage, I did not introduce the members of the committee and it is important for you to get a little bit of feel for where people are from. It might assist in some of the responses—Ian Trezise, member for Geelong, uses the Geelong Road on a very regular basis; member for Rodney, Paul Weller—Rodney, as you are aware, is on the river; Shaun Leane, eastern metropolitan area; Terry Mulder, Polwarth, shadow minister for transport; myself, western Victoria, based in Hamilton; and I apologise for our chairman, John Eren, who is, as you know, member for Lara.

Mr LIDDLE—Yes. David, if we can come back with a full definition of what the change is.

Mr TREZISE—As a matter of interest, talking about statistics, for example, that level crossing smash that took place, I presume those on the train do not count as—

Mr MAVROYENI—They do because there was a vehicle involved in the crash. They would count as passengers in the category that they would fit in, so those 11 add to our road toll.

Mr LIDDLE—This is a bit of a comparison over time when you compare it to rates per 100,000 population. One of the strengths of our targets here in Victoria is they have been absolute and we do not allow them to be watered down by doing them as rates. The only way you can compare them to other jurisdictions is to use a rate. For reasons of comparison we put these up. Over time you can see from the high point of 9.2 down to where we are today, 6.6 rate per 100,000 population—

Mr KOCH—Gary, what took you back into the high 6's in 2004 and 2005, anything in particular?

Mr LIDDLE—I would like to say, David, that for the last four years it has been a static road toll. This year the population increase has had some impact. 337 was the actual number of fatalities in 2006 and we were at 330, George, in 2003.

Mr MAVROYENI—Yes.

Mr LIDDLE—In 2004-05, it was a little bit higher. You are offsetting that against the population increase at the same time.

Mr KOCH—It was a dramatic increase in 2002-03 and then it is on its way down again now.

Mr LIDDLE—My description of the last four years is it has been pretty static.

Mr KOCH—That is good.

Mr LIDDLE—It is good in that increasing usage. More importantly, if you compare it across the world, where we sit in a world ranking, at the high end, USA takes great pride in saying that their road toll is decreasing, which it is relative to per 100,000 population, but you can still see it is a massive number of people. Then you have a group of countries that are all very similar, and Australia as a whole fits into that. We still have a way to go to get the best in the world but we are pretty close to being one of the better jurisdictions in the world, and Australia as a country is pretty good as well. Now coming to some of the more specific comparisons—

Mr KOCH—Gary, if we can turn back for a second, is the Netherlands the last in the world for—

Mr LIDDLE—Sweden might be marginally lower.

Mr KOCH—There are a few countries that are competing for the top spot.

Mr LIDDLE—All around 4½ per 100,000. I do not think anyone has got down to four but I might be wrong, George.

Mr MAVROYENI—Not that I am aware of.

Mr KOCH—Alex was saying that the UK is also amongst—

Mr LIDDLE—I do not think it has got down to four per 100,000 though, Alex. I think 4½ is the best. Paul, we will get to some stuff on country here as well, but doing some of the detailed statistics around metropolitan and country areas, in metro areas driver fatalities are still by far the largest. You can see generally we are either at or below the average—bicycle stuff a little bit—in 2006 compared to the average of the five years, but pretty much everyone else is about where they have been or better than where they have been. Country, a similar comparison. Here pedestrians were up in 2006. Unfortunately in 2006 we had that terrible accident at Mildura. That is in that category. Pretty much everything else, close to the five-year average.

Mr KOCH—When you look at that particular accident consuming about a third of the activity it is very relevant.

Mr LIDDLE—In country Victoria we have had three incidents in the last two years that have really dominated—11 at Kerang, seven at Donald and six, from memory, at Mildura is my recollection.

Mr MAVROYENI—Yes, that is right.

Mr KOCH—Six or 20 is a lot, isn't it?

Mr LIDDLE—Yes. There have been three incidents in two years that have added substantially. There is no new information in that but it is comparing the metro versus country and the relativities of those things.

Mr WELLER—It is a pretty big challenge obviously in the country.

Mr LIDDLE—Paul, when we get to the next chart as well we will see where some of the real challenges are, but clearly run-off-road fatalities, the reason we have this is run off road, whether it be metropolitan or country is still a large issue that we have to tackle. We have to find something to tackle run off road. It is by far the biggest contribution to the road toll in Victoria.

Mr KOCH—Is there anything specific there, Gary? Is there any one stand-out? Is it fatigue? Is it speed?

Mr MAVROYENI—It is a combination of all of those, David.

Mr KOCH—There is no stand-out.

Mr LIDDLE—If we come to the next one—

Mr KOCH—I am helping the presentation.

Mr LIDDLE—You are doing well, David, you are a step ahead of us. Some of these are a bit surprising. Clearly drugs is a bigger proportion than perhaps we expected in the past.

Mr MAVROYENI—Alcohol is included in the 40 per cent drugs. If you looked at drugs alone without alcohol it is around 34 per cent which is quite concerning and on the increase.

Mr LIDDLE—You cannot add all of these up, these do not sum to 100. It is saying these are contributing facts. In 40 per cent of fatalities, drugs are a contributing factor too. The last one I wanted to show clearly demonstrates—we had a look at drivers and run-off-road crashes. Clearly, in terms of absolute numbers, country Victoria, 100 to 110 kilometre per hour zones are largely run off roads, again a very big component of fatalities in Victoria. I am going to hand over to George at this stage. I was trying to paint a picture of where we have been, where we got to and what are some of the types of accidents that if we can find the solution can have the biggest impact.

Mr MULDER—Can I ask a quick question, Gary, in metropolitan Melbourne, 40 to 60, 70 to 90, that does not show what speed they were travelling in those zones when those accidents occurred.

Mr LIDDLE—Correct.

Mr MULDER—Quite often speed could be a contributing factor.

Mr LIDDLE—Correct. What we find though, Terry, is that the median speeds are getting closer and closer to the speed limit. In 50 K zones people are more likely to be travelling closer to 50 K's than they were five years ago.

Mr MULDER—I put it to you that that is more to do with traffic congestion than to people, Gary.

Mr MAVROYENI—We do surveys, Terry, in uncongested conditions. It is free travel speed to take that very factor out of the equation and the results are, as Gary said. In the lower speed zones, the 40 to the 70 range, in the metropolitan area the speeds are coming down; not so in country Victoria, they are pretty much stable and have been for a few years.

Mr LEANE—What do you put that down to, is that *wipe off 5* or—

Mr MAVROYENI—Probably stronger enforcement perhaps is an issue that I would suggest in metropolitan Melbourne.

Mr KOCH—Enforcement is all right in country Victoria.

Mr MAVROYENI—We could strengthen it in country Victoria. We have some graphs if you wanted to have a look at those, the very point that Gary is making. You could have a look at those a bit later on.

Mr KOCH—George, another very interesting thing is you are indicating that people are tending to drive at the top end of the—70 to 90, for instance, they are tending to drive more 80 to 90 than 70. If we take that and have a look at the correlation therefore of 20 kilometres on country roads, we are going from 18 to 147. The loss of life is huge in 20 kilometres, isn't it?

Mr WELLER—It has to do with the energy involved in the crash—

Mr KOCH—Sure.

Mr MAVROYENI—I think we want to be careful in the way we interpret this graph too because the bulk of our speed zones in country Victoria are in the 100 to 110 K zone, whereas the number of 70 to 90 K zones in country Victoria is quite small. Just be careful with that.

Mr LIDDLE—George, we need to swap seats.

Mr MAVROYENI—Okay.

Mr KOCH—Just in the changeover Craig Langdon is going to join us.

Mr MAVROYENI—The safe system approach, we have had a few discussions about the safe system approach. As you know Victoria adopted a safe system approach back in 2002. What you see across the rest of Australia in any road safety strategic document is presentations about the safe system. All of us across Australia are now working to the safe system. Fundamentally, by having a better understanding of the forces that the human body can withstand, before the outcome is either a fatality or a permanent disability we are better positioned to be able to utilise the key elements of a safe system to make some substantial improvements in road safety.

The key elements in the safe system approach are vehicles aiming for safer vehicles, safer roads and their roadsides, adopting appropriate speed limits and, of course, safer road users which are built into that model in front of you. In terms of improving roads and roadsides there has been considerable investment made in this particular area and a commitment to keep going. In recent times the government has announced the $597 million program to improve roads and road infrastructure over the next 10 years, and also an investment of $208 million over 10 years to improve rail level crossing safety. Also VicRoads and the TAC have been making some contributions to municipal councils to improve the uptake of programs to improve roads and roadsides. It is a dollar for dollar contribution over the last two financial years. Both VicRoads and the TAC have provided about $400,000 to municipal councils and that commitment continues into 2007-08 with another $200,000 contribution to municipal councils.

Looking at safer vehicles, we have all been looking for this silver bullet to improve road safety but we are coming to a realisation there is no single initiative that will get us there, we really have to attack road safety on a number of fronts. Our vehicles have been gradually improving but now we are in an era where vehicle safety can make the biggest contribution to road safety than it ever has before. Why so? It is because vehicle technology has now developed to a point where we can make quite advanced application to the technology into our vehicles and improving the road safety environment. This technology can help prevent a crash in the first place, but if a crash does occur it can help to reduce the severity of injury.

Road users: there are a number of initiatives that are taking place currently to improve that. Firstly, the graduated licensing system—and we have had lots of discussion about that but if there is more information, we can provide that to you—that is in the process of being implemented right now. Victoria, along with New South Wales and the Commonwealth government are looking at implementing a novice driver trial. This is basically taking 14,000 recruits across the two states to give them some coaching after they have obtained their probationary licence to see whether in fact you may get some reduction in crash outcomes through that approach, compared to those that do not get any training at all. We will not know the results of this particular trial until about 2010 but it may inform us better than what we have at the moment.

The alcohol interlock program is a growing program. A lot more people are joining it, unfortunately, but it is helping to give us that separation of the drinking and the driving. It is a terrific program and Victoria is one of the leaders in the world in regard to this particular program.

Mr KOCH—George, you are saying 'unfortunately' more people are joining it.

Mr MAVROYENI—Yes, we would rather not—

Mr KOCH—Is that by default or is it by driving choice?

Mr MAVROYENI—Drink-driving continues to be a problem for us, 20 to 30 per cent of fatalities.

Mr KOCH—I am talking about voluntary fitting.

Mr MAVROYENI—No, this is a mandatory program. Through the mandatory program there is about an 85 per cent take-up rate of those when they return to driving have to fit alcohol interlocks. 85 per cent—

Mr KOCH—I appreciate that.

Mr MAVROYENI—take that up which is terrific. Down the bottom, David, is the point I think you were getting to, and that is what we are looking to do is to encourage the voluntary uptake of these particular devices through fleet management. We also need to continue to target sanctions for people that continually repeat speeding, drink-driving, drug-driving and fatigue. We have some work to do to be able to put those programs into place. For speeds we are trying to assist drivers to give them better visual cues of the risks ahead. One of those things we are doing is using things like this vehicle activated signage. We have a photograph here in this particular slide. If you are approaching a curve, a sharp curve, if you are doing that too quickly then the sign will activate and give you a message to slow down. We only have a few of these signs rolled out across Victoria at this stage but the early indications are that people are changing their behaviour and taking heed of the message there.

Mr MULDER—George, the maintenance and the management of those, is that expensive?

Mr MAVROYENI—I am not sure about the maintenance, Terry, at this stage because it is fairly early days but they seem to be fairly cost-effective at this stage but we have to give it some time.

Mr MULDER—Capital costs?

Mr MAVROYENI—In the order of 30,000.

Mr MULDER—Are they solar driven?

Mr MAVROYENI—Yes.

Mr LIDDLE—Unfortunately this one was vandalised not so long ago and was out of action for some time. Terry, that is one of the problems of the maintenance costs.

Mr MAVROYENI—Yes, this particular sign was mounted on timber posts and we had some people out there with a chainsaw.

Mr LIDDLE—That is normally blank. If you were travelling at 40 kilometre per hour or below that would be a blank screen.

Mr MAVROYENI—The other thing too that we would be looking at doing to assist drivers—and you have heard yourselves a number of people complaining about they do not know what speed zone they are travelling in, a constant source of complaint. One thing we are

looking at is this intelligent speed adaptation where some instrumentation in the vehicle constantly gives you a readout about the speed zone you are in and that if you travel over that posted speed limit it gives you a warning. You could take this technology even further, if you are wanting to tackle repeat speeders you could implement a system which prevents them from exceeding the speed limit or, at the very least, making it really hard for them to speed by making you work very hard on the accelerator so it is a very conscious decision to speed.

Mr LEANE—George, are those signs fibre optic?

Mr MAVROYENI—I am not sure.

Mr LIDDLE—Yes, those ones are. They are LEDs, individual LEDs. Every little dot you can see is an individual LED just taken through a fibre to the sign.

Mr LEANE—As far as maintenance you have one globe that can blow.

Mr LIDDLE—These ones are individual LEDs rather than one globe with fibre optics. But you can have a few of the LEDs go out without impacting on the effectiveness of the sign. We are also looking at those that have a single globe with multiple fibre optics.

Mr MAVROYENI—One thing that we do pride ourselves in is putting forward initiatives and proposals that are well researched. That has been our track record and we do stress the importance of that and we will continue to go that way; not a leap of faith but putting forward some proposals on well researched evidence. We have some research under way to look at designing our intersections a bit differently to what we have done in the past. $2 million has been allocated to the Monash University Accident Research Centre to assist us with coming up with a very innovative way of approaching intersection design. That is a program that will be under way this financial year and continues for approximately two years, and we are hoping from that it may lead to a program of further improvements across the state. Of course, understanding why crashes occur is super important. We have had a project under way in recent times to give us some better insights and we will be continuing to proceed with that particular program. In more recent times we have expanded it to also look at motorcycle crashes, what causes motorcycle crashes. We are getting again some better insights into that. We are also looking at exposure rates based on the various types of vehicles, whether we are talking cars, trucks, motorcycles and what is their exposure, what things we can do to reduce the risks with those particular categories.

This is probably building much the same as what I have said in recent times where it is an evidence based setting of the program and in recent times, also with the assistance of the Monash University Accident Research Centre, developed a model to help us predict what reductions we can get in fatalities and serious injuries based on a set of inputs, based on a set of initiatives. You can vary that as you go. What does that lead to in terms of predicted numbers of reductions in fatals and serious injuries. I do not think anybody else in the world has undertaken this but it has proven to be very beneficial at the course level. It does not help you with the micro details, it is much more macro.

Of course we need to keep scanning the world, as we have been doing, to see whether there is any better practice than what we have and to learn from that and apply it here in Victoria. The safe system approach, we have talked about that. That continues to be the way that we will be thinking about improving our system and we expect that will be built into the new road safety strategy to replace the current *arrive alive!* Safer vehicles, of course, is the focus of today's presentation. Why it is really exciting to pursue this is that the research is very promising. Here we have the European Transport Safety Council through its research indicating that we could reduce the road toll by as much as 40 to 50 per cent which is quite dramatic. Not only that, MUARC has done some work in this area too and it estimates that if everyone bought

the safest car in each class, whether they be small, medium large, road trauma involving light passenger vehicles could be reduced by 26 per cent. They then go on further to say that if each vehicle incorporated the safest design elements for vehicles in its class then the road toll could be reduced by about 40 per cent. So the MUARC is starting to look fairly similar and consistent with the European research. There is a great goal for us here in Victoria to go for it. It is fair to say we would need to do this in conjunction with other states across Australia as well to be fully effective.

The National Road Safety Strategy, the action plan that is currently in operation for the next two calendar years, I think it is, really does emphasise the importance of improving the safety of our vehicle fleet in Australia. There are a number of actions that have been identified for all of us to pursue right across Australia, and Victoria intends to push very hard in this particular direction. There has been a study in terms of the risks in vehicles, and we can see here through this study over 40 years or so that due to improvements in vehicle safety, the risk of injury has almost halved since the early 1960s. The improvements in crashworthiness with year of manufacture are due to decreases in both the risk and severity of injury. Reductions in injury risk of around 46 per cent over the 40 years of manufacture studied were observed, and a reduction of injury severity of around 32 per cent over the same years of manufacture. It is quite interesting.

You would have heard of the Australasian New Car Assessment Program which is a five-star rating system—five stars being the best and the safest of all the vehicles. We use this to guide and encourage vehicle safety right across Australia and in New Zealand. Whilst you would expect that over time—as the previous slide I showed you—generally speaking, vehicle safety has improved but that does not apply to every vehicle model. We can see by way of example here that the Toyota Echo and the Nissan Pulsar improved between 2004 and 2007; the Ford Fiesta and the Hyundai Getz showed no improvement at all; concerningly, the Holden Astra and Holden Barina crash ratings declined between 2004 and 2007. This is important information that has to get out to the consumer so they can make informed decisions about their vehicle safety.

Mr MULDER—Is this as a result of de-specifying the safety equipment out or is it just the design of the vehicle?

Mr McARTHUR—Design.

Mr WELLER—You are talking a strategy here where it is all the consumer for the likes of curtains and ESC. Have you ever thought about setting a date that all cars sold as new in Australia have to have these features?

Mr MAVROYENI—Yes, that is being considered across Australia but we will get to this later in the presentation, Paul, but it can be problematic. Changing the Australian design rules has a lot of lead-up time, even if you do get agreement. It has a lot of lead-up time, typically around 10 years or so before you bring some change into effect. We think an alternative way is to use the [ANCAP] scores to encourage vehicle manufacturers to produce safer vehicles and also to encourage consumers to go shopping for safer vehicles.

Mr LIDDLE—That is one thing, Paul, we should talk about later when we get to that particular one because it is a conversation we need to—

Mr WELLER—Yes.

Mr LANGDON—With these scores, apart from having them there and no doubt you can look it up on the website, do you have them on the cars that are being sold like you do with whitegoods?

Mr MAVROYENI—We do not at the moment, Craig, but that is a project we have under consideration—it is not a project yet but it is in its development phase—because we think that has a lot of merit.

Mr LIDDLE—But again you will have fuel usage on a car when you buy it. The potential is to have something like the ANCAP rating.

Mr LANGDON—If you buy a washing machine you have electricity ratings and you have water ratings, and you could do the same thing.

Mr LIDDLE—Yes, absolutely.

Mr MAVROYENI—Is it in America, Ross, that it is mandated that they must show the star rating system on the vehicles?

Mr McARTHUR—I think it is America. One of the conundrums is that not all vehicles have been rated but in the USA they are going to mandate that there be a star rating and if one has not been done they will establish an estimated star rating for the vehicle. In Australia we are certainly looking at it closely. As part of the ANCAP organisation, in the next six to eight weeks, we will start working with dealers to put stars on cars where the cars are rated.

Mr KOCH—Ross, would you see there is an opportunity of introducing it? There will be peer industry pressure to drag the ones who do not put themselves forward for a star rating and I would have thought that in itself would be a very good education tool within the industry and the buying public, 'Put what they are or I'm not getting.' It would take care of itself as soon as it is initiated by one manufacturer, I would assume.

Mr McARTHUR—That is what we are hoping. We are going to start with the makers that do have good star ratings, such as Subaru and a couple of others. The key factor in this is that if you do it at dealer level they see value in sales and there would not be too many people who would deliberately buy a three-star vehicle when there was a four-star vehicle available at a similar price. Price is not necessarily indicative. You can get vehicles with very good crash ratings for the same price as vehicles with poor crash ratings.

Mr KOCH—It was publicised recently that price is important, number 1—that is something we have to respect—but not only that, people are endeavouring to get as much as they can within that price range. Some people have X amount of dollars to spend on a particular production line and that is as far as they can go, and in some cases, for very little extra money, they miss major safety features. I am not quite sure how we jump over that just yet.

Mr McARTHUR—As I say, it really is a commitment from the vehicle maker that you need because the vehicle are essentially the same value, yet some vehicles have a much better crash performance than others.

Mr KOCH—Therefore a new regulation being opposed by our manufacturers in particular or international manufacturers across the board? Where do you draw the line on some of this stuff?

Mr McARTHUR—Vehicle regulations are developed nationally under the Department of Transport and Regional Services as part of the Australian government. Really they are only minimum standards. That is all you can regard them as being.

Mr KOCH—How do they line up against international?

Mr McARTHUR—They are virtually the same. The international standards and the Australian standards are very similar. If you put them in a continuum of star ratings they would be one-star vehicles. If all they did was meet the minimum safety standards in Australia or Europe all you would get—if you were lucky—a 1½ star vehicle. What we are seeing now is that four-star vehicles are common; five-star vehicles are readily available; three-star vehicles are available all over the place. In fact what I would be saying to the consumer is look for a four-star vehicle or a five-star vehicle. The minimum standards are exactly that. They are the minimum below which you cannot go. In effect if you look at them, if you do not meet the [ADR]s the car is scrapped, you cannot sell it. That is what I am talking about here. What we are talking about is encouraging the makers to provide a vehicle with a better crash test performance as part of their normal marketing process to make the sale.

Mr MAVROYENI—This is happening across the world. In Europe and America there is great cooperation between vehicle manufacturers to improve vehicle safety. We say why can't it happen here as well? We do not understand—

Mr KOCH—Why? Is there resistance here?

Mr MAVROYENI—why there is a difference.

Mr LIDDLE—Particularly in the small vehicles we are still seeing that price points are all important, and the top-selling small car in Australia that was a new model released not so long ago without ESC but very quickly when there was a lot said about that it reacted very quickly and said by the middle of next year it will have ESC. But it is disappointing to think that the top-selling model car in Australia, just released, if it was to hit—

Mr KOCH—So that resistance, Gary, is local, it is not international?

Mr LIDDLE—Yes, what you said is right, David, they are still trying to hit price points, but the computing technology in these cars virtually allows any of this to happen at very little extra cost.

Mr McARTHUR—Often you will find the technology available in the model with all the luxury features. The development costs for that technology is sunk, it has already been expended. Sweeping that technology back down through the system to the base model is low because they have spent money on development already and they are looking to get a profit with the high-end vehicle. This idea of cost is generally a smaller issue, not a big issue.

Mr KOCH—Where are you losing the argument?

Mr McARTHUR—You would need to ask the makers.

Mr KOCH—Yes. That is what it comes back to. We appreciate that Terry has raised it a couple of times with all the bolt-on options to get the one you are after because you have to take everything else on the way through and pay and arm and a leg and that knocks you out.

Mr MULDER—That has really nothing to do with design standards, it is more that those products are available.

Mr LIDDLE—Absolutely.

Mr MULDER—You can only usually get them in a package with a sunroof, leather seats and airbags.

Mr LIDDLE—That is right. More and more design standards are now about locking in the base level and we are trying to—

Mr MAVROYENI—Raise the bar. Victoria does have a vehicle safety strategy. Alex, I am not sure if you passed around—we have copies here we can leave with you. When you flick through that strategy you will see there are a number of actions that relate to working with vehicle manufacturers to encourage the production of safer vehicles. There are also a number of actions about helping to better inform consumers about what to shop for. Those actions will continue into the new vehicle safety strategy which is due for replacement at the end of this calendar year. We will be working on that. What we would be looking to do is to incorporate a number of the recommendations, if not all of them, that we are presenting here to you today into that new vehicle safety strategy.

Mr KOCH—George, do you have another strategy to follow this when this retires this year?

Mr MAVROYENI—Yes. We are working on getting a replacement strategy.

Mr KOCH—Any guidelines in relation to that currently available?

Mr MAVROYENI—Not guidelines so much. The best thing we can do—in terms of giving you the direction we are going—is when you look at the recommendations that we are presenting today, it will show you the actioning that we are intending to incorporate.

Mr KOCH—I appreciate very much all the undertakings you have but in many cases there are initiatives that have been in the marketplace for quite some time now with no end time frame on them. I heard you say earlier that we must appreciate that some of these initiatives take 10 years to put into place. Is there any indication as to when the end point will come or is it a rolling stone?

Mr LIDDLE—If you take something like ESC, David, the federal department has presented some information that it believes—and I cannot remember the exact numbers but we can give them to you later—that something like 70 per cent of new models will have ESC by 2010, but it is not driven by a mandated, 'You must comply with an ADR,' which they do not support. It is driven by the market and their analysis of where the market—we know that next year when the new Falcon is released it will have ESC across the range. The Commodore already has that. A car like a Toyota Corolla has said that it will have that by the middle of next year. We are being told, and the guidance we are getting is, that by 2010 the majority of cars on the market will have ESC. ESC in Europe has about a 70 per cent penetration at the moment. We are saying by 2010 we should have something similar. That is just one of the technologies.

Mr KOCH—That is one, that is put to bed.

Mr LIDDLE—Curtain airbags or—

Mr MULDER—It is not put to bed. You have it on several vehicles, you do not have it on your smaller ones.

Mr KOCH—That is right. It is not across the board but there is an initiative in place for 2010 that a suite of vehicles will have that as standard.

Mr LIDDLE—It is reliant on manufacturers continuing to see that the arguments we are putting are valid arguments. It is not being driven by an ADR that says, 'You must have this by 2010.' It is a different approach to what America has done.

Mr MAVROYENI—The manufacturers are also wanting to see that there will be consumer demand for these options we are talking about. If they get the sense that, yes, the consumers will be pushing for it, they are more inclined to put it on the production line as a standard.

Mr McARTHUR—There are two things here. To develop a new Australian design or a new international standard and then implement it because the makers require time to tool up and deliver the new standard, it would not be uncommon to see five years, eight years for that to go through the process. However, with a market-driven approach, which is what is in the current strategy—and it is still a good approach, I might say—you can get changes in months, maybe a year. A vehicle with a bad crash test rating can be redesigned and re-crash tested within a year with a better rating and we see that happening. The makers are driven by the market. If we can create a demand for these sorts of technologies in the community, the makers will supply it. They will supply it.

Mr WELLER—I accept that, but wouldn't you have the safety net there as well? Couldn't you have both?

Mr McARTHUR—There is no-one saying, 'Get rid of the ADRs,' but what we are saying is if you want to establish a fast pace of change, it is creating a demand for a given technology that is the important thing.

Mr WELLER—I accept that, but there is nothing wrong with having a safety net by a certain date.

Mr McARTHUR—Absolutely.

Mr MAVROYENI—Whilst we have been talking about electronic stability control, Gary has the statistics right but in Europe there is about a 70 per cent take-up rate of that particular feature across Europe. The USA is mandating electronic stability control by 2012, and where are we at in Australia? Well, so far, across Australia there is about a 25 per cent take-up for new vehicles, and in Victoria it is about 34 per cent. We think the slightly higher take-up rate in Victoria—we would like to think it is done categorically but we would like to think it is due to the efforts we are putting into raising the profile or the importance of ESC through a lot of the marketing that we are doing in conjunction with the TAC and the RACV. VicRoads has been doing a lot in the space of recent times.

Mr LANGDON—You stated earlier there was no longer a silver bullet we could employ to reduce the road toll, yet the TAC and yourself have both mentioned this could reduce from a third up to 50 per cent of the road toll. I suspect that would be a silver bullet, so why are we not trying to implement it quicker than what we are doing?

Mr MAVROYENI—We are with you on this. We are suggesting it is an important goal to go for but realistically we turn over our vehicles about every nine, 10 years in Victoria. As optimistic as these figures are for us, it is going to take a bit of time to get all these sorts of features across the whole of the Victorian fleet.

Mr MULDER—Earlier on in the day we had the police presentation and they spoke about retrofitting electronic stability control to heavy vehicles. Is that a VicRoads approved system? How has that been adapted and how does that—

Mr McARTHUR—No, we do not approve the system but there is a system produced by a crowd called Knorr-Bremse. It is manufactured by that company, it is very effective and it can be retrofitted to heavy vehicles. The company warrants that system. It is part of the product liability process that any one manufacturer has—a bit like Holden. We do not certify Holden as a great car but what Holden does—based on their product liability issues and the will to make a good vehicle—is they produce a system that works. Electronic braking systems for heavy vehicles is a similar system. The makers produced it and then said, 'Well, it works, can we certify it?' and the regulations were changed so they could certify the electronic braking systems.

Mr MULDER—I just want to pursue something there with this issue you spoke about before that everything you are doing is research based, and just explain to me how that system works. The Hare suspension system that has been developed by a company in Wodonga has had great difficulty, as I understand it, getting support through VicRoads and has taken its system to Queensland. The Queensland government put some money into it. I have a preliminary report here which seems to me to be quite extraordinary and they are now advancing it. How do we lose something like that out of Victoria and why isn't the level of support there for that type of mechanism? They are talking about a 40 per cent reduction in pavement wear on heavy vehicles, better stability, less ability of a vehicle to roll over—a whole host of different benefits with it, but that company had to take that technology to Queensland.

Mr MAVROYENI—I do not know anything about it.

Mr LIDDLE—I do not know the full details.

Mr McARTHUR—That particular suspension system where Mr Hare had some issues was really to do with the road-friendliness of the suspension and getting approval for higher axle loads. I could not comment beyond that. Certainly, you are allowed to use it in Victoria, there is no problem there.

Mr MULDER—In terms of research for a system like that, is there a partnership role in VicRoads or MUARC or looking into a system like that appears to be demonstrating some considerable benefits for road safety?

Mr McARTHUR—As we go on through the process, one of the things we need to do—and it is one of the recommendations in our submission—is that if we discover something is effective, we would promote it, or do research to see whether or not that system is likely to be beneficial in the marketplace and, if it is, promote that too.

Mr LIDDLE—Usually the requirement is that people submitting something like that would be required to submit it with some evidence that indicated it was worthwhile pursuing. I remember that it has been submitted, Terry, but I do not remember the detail. My recollection is there was some concern whether it had achieved what it was saying it had achieved, is my recollection.

Mr MULDER—Yes. What I understand is it went to a certain point where they could demonstrate certain abilities but to take it a step further was going to involve significant cost. The company may have been looking for some support from VicRoads or by MUARC or some funding arrangement to take that testing further. That has not happened here, it is happening in Queensland which I found a bit alarming.

Mr McARTHUR—In terms of ESC, the figures we are quoting there are figures that develop direct from crashes. It is coming out of the States but what we can say is they looked at a sufficient number of vehicle crashes for us to be confident of the benefits of ESC, and it

is based on thousands and thousands of crashes.

Mr MAVROYENI—If you go back to the statistics that Gary presented earlier in the submission, it showed how big a problem run-off-road crashes is, particularly in country Victoria. I think about 45 per cent of all fatals in country Victoria involve run-off-road crashes. Yet what we expect is electronic stability control fitted vehicles would go a long way to reducing that type of crash. The police, the coroner, has spoken very favourably there about the importance of ESC.

Preferences: vehicle safety is increasingly being recognised as a key element in reducing road trauma. However, we have a big challenge to make motorists more aware of the importance of vehicle safety as we spoke earlier. Interestingly, at the community meetings we went to recently, across Victoria, to talk about the development of the new road safety strategy in Victoria and asking for some input to that, despite presenting a lot of information, as you are seeing today, about the importance of vehicle safety and the great gains we can make and what technologies we should be pursuing, at the end of that when we asked people, 'What did you think were high priority actions for Victoria?' vehicle safety did not rate very well. I think it says we still have a lot of work to do to encourage and influence people to think about the importance of vehicle safety.

Mr KOCH—Do we talk too much about it, George, and not delivering—

Mr MAVROYENI—I think we are trying to drive—

Mr KOCH—Are the time frames too long in some cases and we are not delivering some expectations that would take the community with us? It becomes a bit of a talkfest.

Mr MAVROYENI—If we have better informed consumers that will help to put a bit more pressure on vehicle manufacturers to keep rolling out safety improvements, as well as having the changes to the design rules but, as we said, that is a fairly long process.

Mr KOCH—Is there an association between yourselves, TAC, RACV and Victoria Police with industry that churns through a lot of this stuff?

Mr MAVROYENI—Very much so.

Mr LIDDLE—Absolutely.

Mr KOCH—Are there any positions of agreement or do we all walk away and say, 'It was a great afternoon, we raised a few things'?

Mr MAVROYENI—That is a good question, David. We have a number of recommendations that go to that very point. Ross makes that association. We pick up on that and that is very important.

Mr McARTHUR—You have raised a good point.

Mr MAVROYENI—Buyer information: we have already discussed this to death. Again we have talked about these mandatory standards and, interestingly, as Ross had already indicated, if you put together a vehicle which just met all the Australian Design Rule requirements and crash-tested it, it would rate only between one and two stars—two stars at the very best. We cannot just rely on the Australian Design Rules to really force the changes that we are looking for in a fairly short space of time.

Our focus of the submission today is really very much about not only giving you a backdrop

of road system safety but very much about the importance of vehicle safety. The technologies that we have forward, we have not gone to the nth degree and given you the detail about how they work, it is more about bringing to your attention the available range of technologies and how they could be applied to improve road safety. Over to Ross to go through the recommendations.

Mr McARTHUR—I am going to go through the recommendations one by one. A lot of what we have already discussed covers some of the issues that are raised in the recommendations but I will take you through them anyway. In preparing our submission we went through the whole range of potential vehicle safety technologies. We probably looked at 30 or more technologies. Of those technologies we thought 13 offered the best opportunity for improving vehicle safety. It is a good number, and they are available. We are not talking about too much stuff that is on the drawing board either. I will read them into the record for everybody's benefit. We are talking about advanced truck braking systems and car braking systems; anti-lock brakes; electronic braking systems; electronic stability control and emergency braking—that is where the brakes notice there is a problem ahead and they apply for you.

Intelligent speed adaptation which I will talk about later; pedestrian friendly vehicle fronts; side airbags that protect your head, in the rear seats, and the knees; curtain airbags; seat belt interlock reminders to encourage people to wear their seat belts; rear seat restraint systems; daylight warning lights; lane departure warning systems; headway control with braking; adaptive cruise control; cabin strength for trucks; tyre pressure monitoring and driver fatigue monitoring. They are the sorts of technologies that we felt were the best ones to concentrate on at this point in time.

Just to talk to you quickly about electronic stability control—and we have already covered it pretty fully—what it does it applies the brakes around the vehicle selectively. It can individually apply the brakes on those wheels and cause the vehicle, if it is in a slide, to straighten up and out of the slide. It has sensors in the vehicle that determine whether or not the vehicle is sliding sideways or not and it is very effective. US research showed a 45 per cent reduction in single vehicle run-off-the-road crashes and a 32 per cent reduction in multiple vehicle crashes. One of the interesting things about this is we had to go to America to see the research. We did not have enough of that technology in Australia to do this research. At this point in time, at this moment, in fact we have enough technology out there to start doing this research, and MUARC is doing some. This is a representation for how it works. If you have to make a sudden steering change, what can happen is the vehicle can swerve out of control. If it is on a wet or muddy road or there is gravel on the road or something like that, that swerve can happen very easily. This is how the vehicle performs with the technology fitted. I have been in cars and done this test and it works exactly like that. It is very effective. It really is, and we have been calling it the golden bullet in some of that earlier publicity, and that is what it is.

Another one is daytime running lights which does not get a lot of coverage but the beauty of this technology is that it is cheap and it is effective, particularly with pedestrian crashes.

Mr KOCH—Ross, what do you term as daylight running lights, those things under the bumper bar?

Mr McARTHUR—Those things under the bumper bar.

Mr LIDDLE—They can be headlights. VicRoads—all its cars that we purchase for our fleet, they are all wired so that the headlights come on automatically when the ignition is turned on. TAC does the same.

Mr KOCH—I find those lights very irritating on my eyes in country driving at night-time. They have those on, they have the headlights on, they dip their headlights, and these other things are nearly as bright as the dipped lights.

Mr LIDDLE—Daylight running lights are not driving lights.

Mr KOCH—I am aware they are not but they are on at night.

Mr LEANE—Are they fog lights?

Mr KOCH—Whatever the lights are, they are out on every car now.

Mr McARTHUR—No, the lights that are on every car now are not these. I say that again, they are not these. These are special lights. You will not see many cars with these lights. That is a car that we set up to show what they look like in the daytime. It includes headlights on systems which Gary mentioned earlier. What it can do though is reduce by nine per cent the number of pedestrian fatalities and that is an important issue.

Mr KOCH—Ross, I pick up your point. I apologise. I was saying that if there is a technology that can stop having lights on high beam in daylight hours that are run on the roads on a lot of occasions, before these daytime running lights come into manufacture as options, I would have thought technology would have allowed people not to drive around with their lights on high beam during daylight hours.

Mr McARTHUR—It is certainly illegal to do that. It is illegal to drive a car with a light on that dazzles other motorists. That is an important issue. What I would say is technology could help, yes. Point 3 on the slide there, General Motors fit daytime running lights as standard equipment in the US and they have done that for probably more than 10 years. That nine per cent reduction in vehicle to pedestrian impacts is a reliable figure. Driver fatigue monitoring: what these glasses is monitor your eye movement and blinking and they can warn you when you are getting tired. There are other technologies that are now being fitted to modern motor cars which monitor the driver's eye movements and can warn them when they are fatigued or when they should consider stopping to have a rest. Fatigue is a factor in around 30 per cent of fatal crashes.

Rear restraint systems: rear seat occupants are involved in about eight per cent of all crashes. You can have technology fitted to the rear seating positions, a bit like the front seating positions, which include seat belt reminders to make sure that people in the rear seats wear their seat belts. Rear seat airbags: particularly around the knee area, around the upper body area. Those sorts of technologies we are now starting to see fitted into the high-end vehicles. They can reduce the risk of injuries in rear seats. There is evidence to show that the rear seat passengers are less likely to wear their seat belts than front seat passengers. Headway control and active brake: at a recent international conference I went to, emergency braking, automated braking, was seen as one of the most important road safety technologies. It is based on radar or laser systems to look forward to objects and can either maintain the gap between the vehicle in front or if there is an object on the road that is stationary it can stop the vehicle before you hit it. That would be very handy, particularly if the vehicle involved is a heavy vehicle.

Lane departure warning: we mentioned earlier that run-off-the-road hit object was one of the main crash types in Victoria. Lane departure warnings are now becoming available and this shows a video of lane departure cameras watching the white line and making sure that you get a warning if you move out of the lane, and they are becoming available too. This is a video from Citroen.

Mr LEANE—Is it an audible warning, because every time you change lanes it would go off, wouldn't it? I mean, change lanes—

Mr McARTHUR—Well, if you do it deliberately with an indicator on, it cancels the system out.

Mr LEANE—Yes. Okay.

Mr McARTHUR—Yes. If you stray inadvertently, you will get a warning. That is how it determines whether or not it is a deliberate movement or not. Curtain airbags: side curtain airbags that protect the head are very effective in reducing risks of being killed or injured in a crash, particularly in an urban area. About 40 per cent of serious injury crashes in the urban area are side impact crashes. Curtain airbags can reduce the risk of a fatality by up to 45 per cent. If you have curtain airbags in your car and you are driving in the urban area, you can reduce your risk of being seriously injured in a crash by 20 per cent doing that. The beauty of a curtain airbag is it will extend to the rear seat. It protects the people in the next row back. This is a video of—as you can see, that curtain airbag, it is only as thick as your hand. It is quite thin. At 29 kilometres an hour, if you were than dummy, without that airbag you would be dead. There is no debate. Without that airbag in that crash, the driver would be dead. With that airbag, there is a good chance they will survive. It is that simple. It works really well. Almost all cars have them available but they are not always standard equipment.

Seat belt reminders and seat belt interlocks: around 33 per cent of fatalities in crashes are unbelted occupants, even now. We do not think it is because people do not want to wear their seat belts. It is probably for one reason or another they forgot to wear them. I do not meet many people in the street who refuse to wear them. It is a matter of accident or for some other reason.

Mr KOCH—It is a high incident.

Mr McARTHUR—It is.

Mr MAVROYENI—That is of the fatals.

Mr McARTHUR—Of the fatals.

Mr KOCH—Of the fatals.

Mr MAVROYENI—Yes. That is not saying that 33 per cent of Australians do not wear seat belts.

Mr McARTHUR—No. We have a very high wearing.

Mr KOCH—There has to be a correlation there somewhere.

Mr McARTHUR—The risky driver is the correlation.

Ms DOUGLAS—Blokes?

Mr KOCH—Do you mind?

Mr McARTHUR—I have not looked at the male/female figures there. One thing I will say—

Mr LIDDLE—Move on, please.

Mr McARTHUR—One thing I will say is seat belt reminders are considered to be an effective road safety device and they get quite a few points in the ANCAP Crash Test Rating. If you have seat belt reminders you get three bonus points.

Mr KOCH—Ross, to me there has to be a correlation between fatalities of no seat belt and people driving along with no seat belt.

Mr McARTHUR—There is.

Mr KOCH—They are not going to undo them as they are about to hit another car or something.

Mr LIDDLE—I cannot remember. Not wearing a seat belt I think is—yes, is it the second-highest offence for police?

Mr McARTHUR—In terms of numbers, could well be.

Mr MAVROYENI—I would not have a clue.

Mr LIDDLE—Mobile phones is third.

Mr McARTHUR—Yes. An effective road safety device available in a lot of cars, not all. But ANCAP—

Mr LEANE—Available for every seat?

Mr McARTHUR—Often it is just the driver.

Mr LEANE—Just the driver.

Mr LIDDLE—The driver and passenger is becoming more—

Mr McARTHUR—Driver and front passenger. Under ANCAP you get more points. You get the third bonus point if you have them in the rear row. Tyre pressure monitoring, they are going to mandate this in the USA. Tyre conditions are a factor in around 1 per cent of crashes. In defect related crashes, tyres contribute to about—30 per cent of the time, tyre conditions contributes to a defect related crash. The main cause of tyre failure is low pressure where a tyre gets too hot and basically disintegrates. Tyre pressure monitoring is a very useful road safety technology. As I say, they are mandating it in the USA. We really need to consider this in Australia, particularly for heavy vehicles. It is available for heavy vehicles. We spoke earlier about stability control for heavy vehicles. This video runs continuously, but the one on the left is without the stability control and you can see the rear trailer virtually rolls off the ground. The right-hand side of the vehicle is fitted with a stability control and the vehicle travels smoothly. You would not know it was going through that chicane. Loss of control is a factor in about 30 per cent of truck crashes. This technology can reduce that.

Mr KOCH—That is huge.

Mr McARTHUR—All it does is slow the truck. What it does, for the record, is the truck realises it is going into the corner a bit fast and it slows by applying breaks. It has ABS breaks so it does not lock the wheel, it slows the truck to a suitable speed. Before the driver even knows there is a problem it is working.

Mr KOCH—It is doing the breaking on the right wheel versus the driver—

Mr McARTHUR—Yes, it selects the wheel.

Mr KOCH—Yes.

Mr McARTHUR—The other thing, I have been in the cabin of one of these trucks while it was doing these demonstrations and what I will tell you is there is almost no signal that the rear wheels of the trailer are coming off the road. It is almost undetectable. The first thing you know is the bang when those outrigger wheels hit the ground. What that means is, a truck driver, even an experienced one, driving a truck really is not—he could have the vehicle on the limit without even knowing. That is an important factor. That is why they roll over, because they go around this corner at this speed every morning on the way from the depot each day and then one day they go a little wider, a little faster and over it goes.

Mr KOCH—The turntable picks a lot of that up in an articulated vehicle, if that is a normal tray truck.

Mr McARTHUR—Heavy vehicle cabin strength: you need a strong cabin and truck to ensure that the load does not injure you, to ensure that if you are in a crash you are not injured. It also encourages drivers to wear their seat belts. A driver wearing a seat belt in a truck cab has a very low risk of being injured in a crash. It is a very important safety feature, particularly the seat belt. There is a feeling amongst some drivers it is safer to be able to jump out of the cab or leap out of the way, but that does not happen. That is a recipe for sudden death. Truck cab strength is part of the National Heavy Vehicle Safety Strategy [NHVSS]. There is a European regulation.

Pedestrian-friendly: at around 40 kilometres an hour in an impact with a pedestrian, a car will kill many pedestrians. There is a very high likelihood of you being killed. The ANCAP rating for pedestrians goes up to four stars. Many cars only achieve one star in that rating. You can get four-star cars which give a good pedestrian rating. One of the technologies they use is to have the bonnet leap up away from the engine so there is no hard points when you hit the bonnet. That is an effective technology. There are other ways of doing it. As we said earlier, pedestrians account for around 15 per cent of all fatalities. Reducing the risk of being killed or injured by a car in a pedestrian crash is an important road safety measure.

Intelligent speed adaptation can reduce crashes by around three to six per cent, largely because people observe the speed limit more closely and a few kilometres an hour makes a difference. It also saves you fuel consumption. The TAC Safe Car trial demonstrated both these factors. You can use ISA to limit the top speed of the vehicle to be the posted limit and for recidivist speeders that might be a useful technology to apply. It does rely on an accurate speed map for these systems to know what the speed limit is at any given time. There are requirements for the map to be accurate and reliable, but it is a useful technology that could be applied to vehicles that you do not want exceeding the speed limit.

Mr KOCH—Ross, how far are we in Victoria down the path of getting this database together?

Mr LIDDLE—It does not exist, David, at the moment. We have an accurate—you have to fill in a memorandum of consent to get a speed limit. There is an accurate record of individual speed limits, but there is no database that has all the speed limits on it. It is an important building block to what we are talking about that does not exist at the moment.

Mr KOCH—I thought it was under way.

Mr McARTHUR—One of the key factors with ISA is, I have never met anybody

that has said they would not like it in their car. There are technologies out there now that will give you advice about what speed zone it is you are travelling in at any given time. Black box crash recorders: this is out of an aeroplane, the one on the screen, but you can have them fitted to vehicles, to cars, trucks. It is not uncommon to see them fitted to trucks already. Some engine management systems record useful data and ISA. In Europe, trials they did a few years ago—VDO did the trials—in buses, they had a lot of fender-bender type crashes. It reduced these fender-bender crashes by about 20 per cent because the drivers knew that if they were driving in a heroic fashion they would be found out.

Mr KOCH—Again in relation to ISA, why haven't we gone down this path at this stage? Why doesn't it exist? Is it a cost impediment?

Mr LIDDLE—It costs money.

Mr KOCH—You are not in a position to undertake those works at the minute, Gary?

Mr LIDDLE—We have not done it because other things have been higher priority. We estimate it will be about $2 to $3 million.

Mr MAVROYENI—$2 to $3 million, about $2 million.

Mr LIDDLE—About $2 million to do. But until you are going to use it, David, we have prioritised it to do other things.

Mr KOCH—In your priorities is it going to be—or do you look at implementing something or going down that line in the foreseeable future or is this something that next year is going to be the same or the year after? Where do you see it going?

Mr LIDDLE—It is certainly something that is being considered as part of the next *arrive alive!*

Mr McARTHUR—Motorcycle technologies: in terms of motorcycle safety we have concentrated on the rider and the road network. We have had pretty significant benefits from doing that. But in terms of the technology to do with the motorcycle and the helmet and the protective clothing, not a lot has happened. There are very useful technologies out there for motorcycles.

Mr KOCH—We have heard this morning, Ross, that air safety bags are available on some motorbikes—I think Honda was the name that was mentioned—but not applicable in Australia. I think the one that was certainly of more interest to myself, and I would suggest my colleagues, was in relation to the safety vest that is readily available. The figure quoted this morning, and I stand to be corrected, was under $1000.

Mr MULDER—$900.

Mr KOCH—Yes, $900. Where is VicRoads in its support of that technology? Are you working down the track of its implementation from an educational point of view?

Mr LIDDLE—From my point of view I would have to honestly say, David, I was not aware of it.

Mr MAVROYENI—No.

Mr LIDDLE—That is something we can—

Mr MULDER—(indistinct) similar to what jockeys wear?

Mr KOCH—Yes, it is the same thing, Terry. It is an impact-driven—yes.

Mr LIDDLE—Is it like the vest that had the steel support in the back?

Mr KOCH—I have not seen one, but it certainly came out of our hearing this morning.

Mr LIDDLE—Yes. I have not heard of that before.

Mr McARTHUR—There is a range of body armour. But the point I am trying to make with this recommendation is there are technologies out there. People have said it is all impossible. It is not.

Mr KOCH—New regulations—

Mr LIDDLE—I will pursue that.

Mr McARTHUR—I would say yes. I have seen suits that have airbags that come out around the shoulders and neck, a bit like a life vest, to keep your head off the road when you go off the bike. There is a range of technologies you can build in to your safety clothing. Improved helmet standards can reduce the risk of a head injury by 30 per cent.

Mr KOCH—I appreciate those, Ross. It is that that one there I thought was worth raising because I saw that as a very effective opportunity.

Mr MULDER—Can I ask a question on that, Ross. The improvements in safety in relation to motorcyclists, how much of it is going to come out of better training and how much of it is going to come out of improved technology? Is there a defining line there?

Mr McARTHUR—I could not give you a proportion. But what I am saying is that up until this point we have really looked at the rider and the road. There is scope to look at the technology the rider uses on the bike and the clothing they wear and the helmet they have on. Carbon fibre helmet shells perform much better than the normal type of shell that people typically have in a motorcycle helmet. Instability crashes involving motorcycles where they apply too much power into a corner; where they get caught on a slippery white line. We are repainting; making sure all these white lines are not slippery. Things like ABS brakes, electronic brakeforce distribution [EBD], traction control are all technologies that can be applied to motorcycles and all can reduce these instability crashes.

Mr KOCH—Do you look at tram lines as well as white lines?

Mr McARTHUR—Any surface where there is a change in friction they could be helpful.

Mr KOCH—Yes.

Mr McARTHUR—I do not know whether they would absolutely solve the problem or anything, but helpful.

Mr MAVROYENI—Terry, there is some research under way to investigate the benefits that could be gained through motorcycle training, a different system to what we have now.

Mr MULDER—I recently completed my course at the HART, went for a drive and

got my licence, please do not leak my test results.

Mr LIDDLE—Privacy is guaranteed.

Mr MULDER—I got through. Six hours on a bike in a training centre, never ridden one before, and I am able to go out on the road and buy a 260 high-powered bike that can go flat-out. I thought that was quite extraordinary.

Mr LIDDLE—Yes. We are changing the Learner to avoid the really high-power bikes. But, yes, the point you make is still valid.

Mr MULDER—Yes.

Mr MAVROYENI—We will have a look into that.

Mr MULDER—120 hours behind the wheel in a car; six hours on a motorbike.

Mr MAVROYENI—Yes. We are looking at that now, Terry.

Mr LIDDLE—Good point.

Mr TREZISE—At Terry's individual case?

Mr MAVROYENI—Absolutely.

Mr McARTHUR—One of the key factors in our review of vehicle safety technology was that we tend to put our youngest, least experienced drivers in our least sophisticated, cheapest motor cars. 30 per cent of drivers killed on the road are aged between 18 and 25 and they only make up 40 per cent of licence holders. They tend to drive these smaller, more affordable vehicles that have less crash protection. They are older. We need to think about that. I have a recommendation further on about that. This is the graph. It is important to monitor how you are doing with the rest of the world, and this is an example of what is happening with ESC. You see Australia down at the bottom and Victoria at around 29 per cent and 24 per cent in the rest of Australia, yet in Europe it is 77. In Ireland—this is European NCAP data—they were bemoaning the poor performance in Ireland at 53 per cent.

De-specification is occurring in Australia. This is where a vehicle is imported into Australia and it does not have the equipment that is fitted in other parts of the world. We did a comparison of 106 vehicle types available in Australia with the UK. We found 44 vehicles had different specifications. The new Ford Focus model released in July, in New Zealand it has ESC and side curtain airbags as standard equipment; in Australia with the exception of the sports model it is an option. Why is that?

Mr LEANE—Can we ask you that? We will ask the questions here.

Mr LIDDLE—It is the price points.

Ms DOUGLAS—Installed.

Mr McARTHUR—What we do, we at VicRoads monitor the fitting of safety technologies. We monitor about 15 of them on a quarterly basis. We can tell you how we are doing in comparison with the rest of Australia in terms of fitting ESC; we were at 29 per cent, the others were at 24. It is very important to have good data to base your decisions. This monitoring is part of how are we doing with our vehicle safety program, what can we do to improve the take-up of safety features? What we think is, we are doing better in Victoria

because we have been marketing the importance of safety. We like to benchmark Victoria and Australia against other countries that are leading, for example Sweden, US, Germany and Japan where you get a blend. In Sweden the fitting-out of safety technologies is much higher than in Australia, as it is in Germany; much higher than Australia. In the US, it is still higher. It does not matter where you go, it is almost higher. But you need data. You need to monitor consumer attitudes towards vehicle safety. It is very important. What we find is, buying a vehicle is an impulse decision. It seems strange, but it is. One weekend the car will give trouble; the following weekend a purchase will be made. We have done research that shows this. What that means is, you need to have that vehicle safety information out there all the time so people are always informed so when they do make a snap decision they go for a four-star car, five-star car instead of the three-star car.

Safety issues were not on the whole not a key when purchasing a car. We have to work to change that. Style, practicality, fuel consumption were the main drivers. Safety was only raised by people in four per cent of cases surveyed. This goes back to someone else, about when is this happening. I think David said that. ABS took 20 years to get into the fleet at a 75 per cent level. We need to set milestones and drive the process faster. You can make a quantum leap in terms of fitting technology in 12 to 18 months. It has happened in Europe and it is beginning to happen here in Australia. You do that by making sure the community demand safety features, then the makers fit them. We are developing a new vehicle safety strategy and we have an existing one which we distributed earlier. It is based on marketing safety. Safety is not a luxury. Safety should be built-in as a standard feature. That is the key to all of this.

Mr KOCH—Saying that, Ross, how much money does government deploy on the marketing of safety through VicRoads, or do you allocate that within VicRoads?

Mr McARTHUR—We have a significant budget in VicRoads.

Mr MAVROYENI—It is well over $1 million that we have in the most recent financial year, 2006-7.

Mr KOCH—With the job in front of you it requires more resources. $1 million today does not go a long way, does it, with the mass advertising that you propose to undertake.

Mr LIDDLE—This started, David, a couple of years ago and we have appointed a specific person to drive it in VicRoads—

Mr KOCH—Yes.

Mr LIDDLE——recognising that it is not only convincing the consumers but making sure the manufacturers are there as well.

Mr KOCH—They are the ones you have to catch.

Mr LIDDLE—Yes. Yes, it is modest but it is certainly started.

Mr McARTHUR—This is a bit of discussion about the ADRs. What we are saying now is that we are seeing in Europe and America things like ABS brakes have been standard for years, but not in Australia.

Mr LIDDLE—It is interesting now that with ADRs when we try and convince the federal department to put ADRs in place they recognise themselves how slow a tool it is to drive change. All Australian states have tried to convince them to put an ADR in place for ESC, but they resist doing that because they think it will be quicker to drive it through the

marketplace.

Mr KOCH—What would it take to convince them to go the other way.

Mr LIDDLE—It has been raised at two Australian Transport Council meetings now, David, and been knocked back on both occasions.

Mr KOCH—For any particular reason?

Mr LIDDLE—Largely what I said. Two reasons: they are concerned that it stops innovation. In writing an ADR you need to be quite—Ross would know better than I, but you need to be reasonably explicit about what that technology is. They are concerned that it would stop innovation, but also recognising that it will not achieve the outcome that people are looking for in terms of time frames. There is probably a minimum of five years, as Ross said, to get an ADR in place. It is probably those two things mostly.

Mr McARTHUR—It has been very hard to convince the Australian government that we need ABS brakes on heavy vehicles. It has been mandated overseas for years, yet for some reason we cannot get it mandated in Australia. It has to do with the feeling that they want to harmonise internationally with requirements. If we want to harmonise, why don't we harmonise with ABS brakes? The alternate side of the coin is, we have done a cost-benefit analysis and it does not stack up. That is what they say. But the beauty of these technologies is, everything rides on the back of the technology that ABS provides. That is what happened with ESC. ESC rode on the back of ABS technology in cars. Roll stability in heavy vehicles rides on the back of ABS technology. We need to step up our game somehow.

Mr KOCH—DOTARS was very keen to get road administration across all boundaries stitched up, but safety obviously does not carry the same weight.

Mr McARTHUR—One thing we do know, we are talking with them in a productive way. What we want to do, and this goes back to someone's earlier comment—I am not sure if it was Mr Langdon's point—we need to keep working on them. We do not give up. What we say is, a marketing approach is a good way to go, but let us not give up on the national process either because if the base standard is lifted, that has to be good too. In Europe they have heavy vehicle underrun and they are adopting that, and pedestrian protection. The interesting thing about underrun barriers is, we are moving in Australia to have a national standard on front underrun for rigid trucks, but it does not include rear underrun and does not include side underrun.

Mr LANGDON—Why?

Mr McARTHUR—The assessment the Commonwealth made—you might have to ask them. My understanding of what they did is, they did a cost-benefit analysis and they found that the side and the rear was not justified.

Mr MAVROYENI—That is correct.

Mr KOCH—As simple as that.

Mr McARTHUR—The thing about side underrun, it helps you with pedestrians, motorcyclists and cyclists. With front underrun, what it does is it allows the energy absorption capacity of the car to work. Rather than everybody under the front of the truck and being killed, it keeps you away from the truck and allows the progressive crush of the cab of the car to protect you. That is beneficial. We have covered this one. Fleet purchase policy. It probably comes as no surprise that about 60 per cent of all new vehicles are sold into fleets.

This includes both corporate and government fleets. Chain of responsibility, OHS requirements are a very strong driver for purchasing safe vehicles. Getting to the fleet buyer is a really good way to encourage the markets to supply technology. VicRoads is doing that too and I will tell you how in a moment. The Victorian government recommended purchasing policy includes those items: side curtain airbags, cargo barriers, electronic stability control and so on; four star ANCAP rating. At VicRoads you cannot buy a Falcon motor car any more because it does not come with ESC or side curtain airbags, not as an option. We can buy Toyota Aurions and Camrys because they have it. The new Holden VE Commodore has it. It is something that the manufacturers notice, when you strike their vehicle from your buying list.

Mr KOCH—How quickly does the manufacturer move, Ross, when that sort of impediment comes from fleet buyers? Will they turn around—I know they are going to do it next year on the Falcon. But it takes them that amount of time to move, where they have an optional fit to get it back to a standard fit.

Mr McARTHUR—If it is bolt-on technology they can bring in from overseas, and often it is, you can get that in six months.

Mr KOCH—Yes.

Mr McARTHUR—If they have to redesign the roof structure, which is what Ford had to with the curtain airbag, they generally leave it until there is some model upgrade which can be some years. But it should not be a mystery to makers that these sorts of changes were occurring. We have been talking about this for years, but no-one seemed to take it seriously until it happened. The Victorian government fleet has approximately 20,000. It has a new purchasing policy. What I would say about purchasing policies is they need to keep up with what is out there. When the next step comes along, ESC is available, you ask for it. When curtain airbags come along, be aware and ask for it. It has to be a living document, not something that has been written in 1992 and you stick with it from then on.

ANCAP, this is a crash-test rating program. VicRoads puts quite a bit of resources into it, and so does TAC, to crash-test vehicles and publish the results because the manufacturers do not do that. People need a rational way to try and select a safe vehicle. ANCAP crash-tests those vehicles. As part of that, as I mentioned earlier, they are putting a Stars on Cars campaign in place towards the end of this year so people when they get to purchase a vehicle can see it on the vehicle when they arrive.

VicRoads is building consumer demand by a whole range of things. We are running an ESC awareness program. We are doing advertising in the print and you will see that start soon. We are developing a fleet buyer's kit which has been finished. We are encouraging the star rating on cars program, which we mentioned earlier. We are continuing to contribute to the ANCAP program. We did not mention it here, but the Used Car Safety Ratings program [UCSR], we did a launch about a week ago, two weeks ago.

Mr LIDDLE—A couple of weeks ago, yes.

Mr McARTHUR—That had good media coverage. The used car ratings are based on over a million crashes. It is the biggest database in the world for this sort of thing. Most people buy second-hand cars, it is very important. We are developing our new vehicle safety strategy. This is how you rate things. We want to continue and accelerate this marketing of safety of the consumer. It has not been released yet, but ANOP did research for the Australian Automobile Association. I think it is going to be released this week so I cannot hand it out yet. But what it shows is that awareness of star ratings for car safety in Victoria is 64 per cent; in other states it is around 43 to 47 per cent, maybe 50 per cent. In Victoria we are doing

better because we have a better marketing program. In Western Australia they are doing well too, 66 per cent, because they have been marketing vehicle safety. Marketing works. It is like selling anything else.

This is our ESC simulator. The simulator is owned by Bosch. We created a trailer so we could get that around to as many places as possible. We have had it around Victoria, in rural areas and in city areas, previously. We are going to start again. Now we have a trailer we are going to do a better job of it. This will be at the football in a couple of weeks. People can have a look at it and try it out on the way in, to get a bit of information out there.

Mr LIDDLE—It is pretty amazing. If people do get a chance to experience it, it really is amazing.

Mr McARTHUR—It is. It really is a winner. It is better than watching it on the screens.

Mr LIDDLE—Absolutely.

Mr McARTHUR—It is pretty good. We have demonstrated up at the ATC in Canberra as well. In Europe manufacturers are active in advertising a star rating of the vehicles they make; in Australia that almost never happens. We are working on that. Why, if they get a good result, they do not publish it, I am not sure, but Subaru does. We mentioned intelligent speed adaptation. Consumer incentive schemes. We mentioned the cost of technology. We mentioned earlier that younger drivers, the more at-risk drivers, drive the cheaper, older cars. What can we do to create incentives for them to get a safer car?

Mr KOCH—Why hasn't something been spoken to the insurance industry? If you are going to make a safer motor vehicle—

Mr MAVROYENI—That is one idea.

Mr KOCH——why would we have an increase in premiums, for goodness sake, on value of product?

Mr LIDDLE—Safer vehicles are usually more expensive to repair.

Mr KOCH—Cost of product.

Mr LIDDLE—It is the trade-off between the two things. But the answer is, we are talking to them, David, but that is the sort of trade-off that exists.

Mr McARTHUR—I think we have a black sheep here. We really want to look—we are going to try everything. Memorandums of understanding with industry: this is a very useful tool. It is very effective in America, for example, where manufacturers have agreed to improve the way they build their vehicles as a result of pressure from the government and the community. As Gary said earlier, regulations tend to be restrictive and they box you in to a given design or approach. An MOU allows the maker to explore all the things they can do with their vehicle and do it their way, and enables them to select a niche in the market where they can fill. The memorandums of understanding and agreements, they are very important. In Europe it works too. We have never really tried it in Australia. We think it is a worthwhile to approach manufacturers. Trials of technology, which we mentioned earlier. Assessing technology which ESC is probably the best example of recent times where we have done that, and curtain airbags. That is it.

Mr KOCH—Thank you, Ross, Gary and George. We are only a minute into time. I

appreciate very much you being able to give us that amount of information in an hour and a half. It is most appreciated.

Mr McARTHUR—Thank you.

Mr KOCH—Before closing the session, are there any further questions? If there is not, I would like to thank you for coming, Gary, and your colleagues from VicRoads. I would like to thank Alex for putting all this together today with David's assistance. On behalf of my colleagues, thank you for joining us and speaking to your submission which we appreciated. Thank you.

Mr McARTHUR—Thank you.

Witnesses withdrew.

Committee adjourned.