**Fresh thinking on a tired subject  
Toll’s new driver fatigue management standard**

**Rosemary Pattison  
Quality and RTO Officer  
Knowledge Transfer – ARRB Group  
P: +61 3 9881 1590, E: training@arrb.com.au**

Good morning everyone. It’s wonderful to have you all here today for our webinar *Fresh thinking on a tired subject, Toll’s new driver fatigue management standard*. This webinar is proudly brought to you by the National Road Safety Partnership Program, or NRSPP, in partnership with ARRB Group and of course the Toll Group.

My name is Rosemary Pattison and I will co-moderate this session and provide tech support if required. My esteemed colleague Jerome who manages the NRSPP and its many activities joins me in the studio as our primary moderator today. Welcome Jerome.

**Jerome Carslake  
NRSPP Manager  
ARRB Group  
P: +61 3 9881 1670, E: Jerome.carslake@arrb.com.au**

Thank you very much Rosemary. A pleasure to be here.

**Rosemary Pattison:**

And for those joining us for the first time, could you tell us a little more about the NRSPP and its purpose?

**Jerome Carslake:**

Certainly. The National Road Safety Partnership Program has been established to provide a collaborative network for Australian businesses and organisations to help them create a positive road safety culture both internally and externally. It aims to help organisations of all sizes across all sectors to share and build road safety initiatives specific to their own workplace and beyond.

It is delivered by ARRB and funded primarily by government coalition and ARRB. So for more information and more tools like this webinar, please refer to the NRSPP website. And once again a special thank you to Toll who’s one of our steering committee partners as well, for taking the time to share their learnings.

**Rosemary Pattison:**

Awesome. Thank you Jerome. It is my absolute pleasure to welcome Dr Sarah Jones to the studio today. Dr Sarah Jones is the Group Manager for Road Transport Compliance at Toll Group. She was formerly the Director of Compliance and Technology at the National Transport Commission where she led the team that put the Heavy Vehicle National Law together.

Dr Jones was named one of Australia’s 100 women of influence in 2013 for her work in transport policy, and as one of the country’s foremost regulatory experts in the transport space. So welcome Sarah, and it’s over to you. Can’t wait to hear more.

**Dr Sarah Jones  
Group Manager, Road Transport Compliance  
Toll Group  
P: (03) 9694 2816, E: Sarah.Jones@tollgroup.com**

Thank you so very much Rosemary and Jerome. It’s a real delight to be here to talk about a subject that has absorbed me over the past year and a half. I am really pleased to be able to share some of Toll’s thinking with you.

Just to put the discussion into some context, I’ll tell you a little bit about Toll Group. So we are part of Japan Post, and we are the Asian region’s leading provider of logistics services. We have about 40,000 staff at 1,200 sites in more than 50 countries. Currently in Australia we operate about 3,000 heavy vehicles. So our size and scope do make us a-typical in the context of the industry, where approximately 70 percent of operators have only one truck, and we are part of the less than 0.5 percent of operators who have fleets with 100 or more trucks. So I think it’s important in the context of this discussion to bear in mind Toll a-typicality.

So why is it that we have spent the last year and a half thinking so deeply about fatigue and its potential impacts? What we know at the moment is that fatigue is the predominant cause of about 12 percent of serious injury crashes involving heavy vehicles in Australia. Several years ago Professor Ann Williamson did a really interesting study whereby she compared the responses of two separate groups of people. So one of those groups were blowing 0.1 blood alcohol concentration. The other group had been kept awake for more than 24 hours. And what Professor Williamson found was that physiologically those groups were virtually the same. So the same response times, same reasoning, same capacity, which I guess yields a really interesting rhetorical question, which is that would you put somebody behind the wheel of a truck who was blowing 0.1 blood alcohol concentration? And I think quite clearly the answer is no.

The risk that we’re facing is that somebody who is impaired by fatigue could experience a microsleep while they’re on the road. And what this means is that if the vehicle was travelling at about 100 kilometres an hour and the individual had a microsleep of about two seconds, then that vehicle would travel nearly 56 metres with no one effectively in control of the vehicle. And that clearly can have very, very serious consequences for the driver and for other road users.

When we think about fatigue, I think it’s helpful to think about it in terms of the risks it poses on the road, but also the risks off the road. And I think we have perhaps a tendency in modern life to think of fatigue as just part of life, just part of how it is. We’re all busy, we’re all tired, we all have a lot on our plate. Now I think that sometimes this can feed in to a sense of complacency about fatigue, and perhaps prevent us from thinking about it as a risk that we need to manage.

So on the road what we know is that people who are impaired by fatigue are more likely to have inappropriate lane deviation, their steering responses are slower, they have slower responses to changes in speed of other drivers, and greater variation in their own speed. They can also experience impaired visual scanning or tunnel vision, and they have generally slower reaction times. And of course they’re at risk of a microsleep.

Now off the road and in the longer term, there’s also a heightened risk of blood pressure increases, a risk of heart disease, of gastrointestinal problems and weight gain. There’s a disruption of circadian rhythm and a risk of type 2 diabetes. People who’ve been exposed to long term impairment by fatigue are more likely to smoke and use alcohol. They’re also at greater risk of irritability and depression.

Now just recently the results of a survey were released which suggested that transport workers are about seven percent more likely to develop depression than other Australians.

So how does the law and the policy framework approach these problems at the moment? Well for most of the industry on the eastern seaboard, fatigue is defined in the Heavy Vehicle National Law and its supporting regulations. And those fatigue laws apply to drivers of vehicles 12 tonne and above. Now it’s important to note that the Heavy Vehicle National Law generally applies to vehicles four and a half tonne and above, but in the case of fatigue it has nothing to say on those vehicles between four and a half and 12 tonne. So there’s this ambiguous grey area in the law.

At this point in time Western Australia and the Northern Territory are not signatories to the Heavy Vehicle National Law. So they operate under their own state based system which are generally more permissive in terms of hours of work and rest.

Now although nominally there is this national law for the eastern states, important differences do remain in how the states and territories approach fatigue. So just to give you one example, New South Wales has introduced a concept of personal activity. I actually think the reasoning behind this was quite sound. So New South Wales has said that a driver can use their heavy vehicle for a period of one hour for what they call personal activity, and this would be things like driving to a café, going to the gym, going to the supermarket with that vehicle to pick up supplies. And in that jurisdiction that can be counted as rest for that period. But as soon as that driver travels either into Queensland or into Victoria, those jurisdictions count it as work. So all of the various transport operators and drivers need to be mindful of these quirks and variations between states.

Now when it comes to the Heavy Vehicle National Law, it basically has two decrees where fatigue management is concerned. So the driver needs to do two things. First of all they must comply with prescribed hours of work and rest. Now that relatively speaking is fairly easily done. So you would use a national work [inaudible] or scheduling system to track hours of work and ensure that sufficient rest is scheduled.

But the second thing that must happen is that drivers must not drive while impaired by fatigue. So it is possible that a driver and their operator could comply with all of the requirements around work and rest hours but still be impaired by fatigue. How do you manage that? I think this is really complicated by the fact that unlike say blood alcohol or speeding, there’s no objective test we can administer to find out how impaired somebody is by fatigue. There’s an element of subjectivity and judgment call. So how do we manage what can’t be measured or tested for?

At Toll Group we’ve had an internal policy in place since about May 2012 to help us tackle these vexed issues around fatigue. In February 2014 the Heavy Vehicle National Law commenced, which means that we had this legal and policy framework in the eastern states supported by regulation. So we felt in 2015 that it was timely to revisit our approach to fatigue, and to consider whether our policy was really hitting the mark. The questions we asked ourselves were does our policy clearly explain our obligations? Are our expectations about fatigue management clear to our people? Can we improve our policy in any way? We also wanted to get a Toll wide view of fatigue systems and processes, identify our major risks and propose ways in which we could potentially manage this.

Now we limited ourselves in scope to heavy vehicles, four and a half tonne and above, on public roads. So we didn’t look in any great detail at our fleet operating on private roads such as mine sites.

In order to give you some idea of what we’re up against in managing fatigue, I’d like to tell you about some fatigue related incidents that we have experienced at Toll Group. I had a look through our records and determined that over a 12 month period between 2014 and 2015 we had about 53 fatigue related incidents whereby fatigue was the primary causative factor in incidents. Now most of those incidents are related to record keeping issues, but we did have one fatality. And I’d like to talk to you in some depth about that fatality, because it really illustrates I think the nature of the risk that we have.

What happened was we approached a sub-contractor to do a piece of work for us, and that sub-contractor put together a two up driving team to acquit the task.

The vehicle that was used for that work had a sleeper berth in it. If you’ve never seen what a sleeper berth looks like, you can see a photograph here of a typical sleeper berth. So those two drivers embarked on their journey, and along the way one of the drivers experienced fatigue and he ran off the road, and that vehicle rolled. Now at the time that that vehicle rolled, the second driver was in the sleeper berth, and when the vehicle rolled he was effectively trapped within the cabin. He was fully conscious at the time, but because of the remote nature of where the incident occurred, it did take some time for emergency services to arrive, and sadly the driver in the sleeper berth did not survive this incident.

I think there’s really three key points to be taken from this fatality, and the first of those is the risk associated with sub-contractors. Now there are many very good safe and competent sub-contractors, and we work with many of them. But in the terms of the Heavy Vehicle National Law, when Toll Group transitions from being an operator or an employer to being a prime contractor, our legal risks and obligations remain exactly the same. So same level of responsibility but a reduced capacity for oversight, because after all we are not the ones directly acquitting that work.

I think the second thing that this fatality illustrates is that what is legal and what is safe are not always the same thing. Let me explain what I mean by that. So in this instance the driver who was at the steering wheel at the time the vehicle ran off road had in fact completed eight hours work in the yard before he was approached to do this task. Now because the tasks that he was doing at the depot did not directly relate to the heavy vehicle, it isn’t technically considered work in terms of the Heavy Vehicle National Law. So technically speaking he had the full 12 hours in the bank.

Of course a broader definition of risk under workplace health and safety would say well, was that the most sensible thing to do, the wisest thing to do? And it really brings us back to this bedrock position that technical compliance, technical legality and safety might not be the same thing.

I think the other really important point to note about this is the point about culture. So when the surviving driver was interviewed after the incident, he was asked ‘If you knew you were experiencing fatigue, why didn’t you pull over? You had this resource less than 30 centimetres away from you. Why didn’t you ask the other driver to take over?’ And his response was ‘I wanted to be a good bloke and let him sleep’.

I’ve thought about that comment over and over again in an attempt to understand this incident and the cultural barriers that we’ve got to managing fatigue really effectively, and I just think this statement sums it up, this misplaced sense of doing the right thing and this idea that you can tough it out. And this again has to do with blokey-ness, and the demographic that we’re working with here is overwhelmingly a male demographic. So it really brought it home to me that we had to tackle the issue of culture.

So I’ll pause there and take any questions you might have at this point.

**Jerome Carslake:**

Fantastic Sarah. Quick question first. How’s the driver doing, the surviving driver?

**Sarah Jones:**

Look, from what I understand he’s struggling, as you would imagine he would be. I mean he’s going to have to live with the implications of that decision for the rest of his life, and it can’t be easy.

**Jerome Carslake:**

Thank you Sarah. We have a couple of questions here. The first one is quite an interesting sort of a take on it. You mentioned that question around how do you measure fatigue or pick fatigue. Is there much of a difference with regards to fatigue from result of lack of sleep to fatigue from say heavy exercising? Is there a difference in how [0:19:20] they treat or a driver may be behind the wheel?

**Sarah Jones:**

Yeah. That’s an interesting point. There are certainly some researchers in the area who make a distinction between drowsiness for example and sleepiness and general levels of fatigue. I mean one can feel wearied in an almost satisfied way after exercise which mightn’t pose an immediate on road risk, and yet be fatigued in quite another way after an extensive period of time on the one task. And those differences in terms of fatigue as a function is something I am going to return to later.

**Jerome Carslake:**

Thank you. Another question here, just drawing on that sort of angle. Distraction and fatigue. I think this is back to the very first webinar NRSPP did with Greg Smith looking at in vehicle camera systems. There’s a lot of questions around the impact of distraction. Is there much of a link between distraction and fatigue as well?

**Sarah Jones:**

We don’t know is the short answer. But you’re certainly right, that the use of our in vehicle cameras is suggesting that some incidents that at one time we might have put down to fatigue, when you look at it on the camera actually appear to be more about distraction. I think there’s a lot we don’t know about the relationship between fatigue and distraction.

So for example some drivers will tell me that they will listen to their CB radio and talk to other people on the CB radio as a fatigue mitigation tool. So technically you would say well there is capacity for distraction, but is that a distraction that is mitigating a fatigue risk? So I think there’s a whole lot of unanswered questions in that space.

**Jerome Carslake:**

The next one we’ve got here from Michael.

*Q: I have a question for Sarah. What research is there that links diet and nutrition to fatigue, and does Toll provide nutrition and diet based coaching?*

**Sarah Jones:**

Okay. Good question. No, we don’t provide individualised nutrition and diet based coaching. In answer to your first question, yes there is material that links fatigue and diet. I’ll direct you to have a look at the National Transport Commission’s guidelines on managing fatigue, because those guidelines do talk about the relationship between diet, exercise and fatigue, and talk in a fairly generic way about the impact for example of caffeine, alcohol, use of stimulants and time of day at which heavy meals are eaten. And we’ve taken that material and similar material and packaged it up for our people, but it’s fairly generic and non-individualised.

**Jerome Carslake:**

And we have a last sort of question before we move on here from Michael.

*Q: How aware are Toll drivers of the risks relating to I guess the impacts on fatigue on the personal side? Obviously they understand the work environment risk and the microsleeps on the road, but what about the personal impacts one can do to their body and mind over time?*

**Sarah Jones:**

I think Toll Group has been really good in terms of disseminating information through tool boxing. So we’ve used toolboxes to bring drivers together and to release information to them, encourage them to think about these kinds of issues and take them on board in their own personal lives. But look, I think – sorry to use a cliché here, but I think we’re on a journey with this, and we’re really trying to encourage people to think about the risks associated with fatigue, not just on road, but in terms of people’s personal health and wellbeing.

**Jerome Carslake:**

Fantastic. Thank you Sarah.

**Sarah Jones:**

It’s a pleasure.

**Rosemary Pattison:**

Jerome, are you right to move on?

**Jerome Carslake:**

Certainly am. Fire away Sarah.

**Sarah Jones:**

Thank you. So I’m going to return to those three issues I mentioned about sub-contractor management, safety and legality and culture and just talk a little bit about how we’re tackling this at Toll Group.

So we have introduced a sub-contractor management system in order to really instil some discipline and rigour into our systems regarding the use of sub-contractors. So for example we now have a prequalification system whereby we look at things like sub-contractors’ licences, accreditations, insurances, COR systems etcetera, just to give ourselves confidence that the sub-contractors are on the same page as Toll in terms of their approach to safety and compliance.

We also now have in-house auditors who focus exclusively on auditing our sub-contractors. So there’s quite an exhaustive audit tool which asks some fairly probing questions of sub-contractors so that we better understand their operating systems and their culture. And we also have a requirement that our captive sub-contractors need to be using GPS monitoring – we do that through our in-vehicle monitoring standard – so that we’ve got really good visibility of driver speeding events.

Okay. I mentioned earlier that we are trying to move beyond the bedrock question of is it legal into a broader question of well is this safe, and is it consistent with the Toll way. So here at Toll we have a central value that says no task is so important that it cannot be done safely. And when we started thinking about this, there were a few areas where we thought well that might be technically legal, but do we think it manages risk and promotes safety.

So for example we’ve taken the decision that we will not operate to the Northern Territory system in that jurisdiction. And we took this decision because the Northern Territory law basically says that a driver must have a minimum of six hours rest in a 24 hour period, which infers that 18 hours of work is acceptable. And when we looked at the fatigue data and the current state of knowledge about fatigue, we didn’t feel that that was going to be the safest for our people.

We’ve also decided to apply our new driver fatigue management standard to all vehicles four and a half tonne and above. So we’ve effectively eliminated that ambiguous grey area in the Heavy Vehicle National Law, and we have decided that for those vehicles standard hours will be our default position. So we’ve put some certainty there.

We’ve also decided that we’re still going to use safe driving plans. Now for anybody listening who’s not familiar with the safe driving plan, basically what this is is a plan that says this is the task that needs to be done, this is how long we expect that you would be driving for, and we approximate how long it will take an individual to do the task considering the road environment, safe and legal speed etcetera, and any other associated tasks like loading, unloading, fuelling etcetera. And we indicate to the driver on the basis of how long we think the task will take, what rest breaks they’re required to take in a statutory sense, of course encouraging them to take discretionary rests as and where they need it.

Now safe driving plans were mandated by the Road Safety Remuneration Tribunal in their first order. That tribunal no longer exists, and we had a pretty lengthy discussion in Toll Group about the value that safe driving plans brought and we decided that we’re going to continue using them.

We’re also encouraging the use of discretionary rest, and we’re doing this to really try and tackle that question of impairment by fatigue, whereby you can be compliant with work and rest hours but still experience impairment. And one of the ways we can tackle that on the road is by creating a culture that says to the drivers ‘If you are at risk of a microsleep, if you are concerned about impairment by fatigue, then you are empowered to pull over and take a discretionary rest’.

But how do we do that? How do we build the kind of safety culture where people feel confident that they can make these decisions about discretionary rest and not fear a repercussion or punishment, or that they’re not getting the freight there fast enough?

One of the things that we’ve done as part of our review is to identify the kinds of myths and ideas that could prevent us building this kind of culture. And we’ve come up with about six of them, and I’ll talk you through them now.

So the first one is this idea that if you’re tired you can just push through. Well, no. There’s this wonderful quote from the Civil Aviation Safety Authority in Australia, and it says this. Fatigue cannot be prevented by personality, intelligence, education, training, skill, motivation, size, strength or professionalism. In other words, fatigue is a biological imperative, and it needs to be managed by taking rest. So it’s not an aspersion on the individual if they decide to take a discretionary rest.

Secondly, my job is getting the freight where it needs to be at the time it’s supposed to be there. Everything else is secondary. Well, at Toll Group we believe that no task is so important that it can’t be done safely.

Number three. The customer is always right. Look, we work in a service environment. We certainly aim to keep our customers as happy as possible. But the customer ceases to be right at the point that they make demands or omissions that put our people and other road users at risk.

Number four. Real men don’t ask for help. Well, the message that we’re trying to get out there is that very few people, male or female, go through their lives without experiencing stress or trauma, and this stress and trauma can have very real implications on the road.

Number five. It’s not my business what the driver gets up to on his or her time off, which is allied to number six. What I get up to in my own time is my business. And look, clearly every individual has a right to privacy and to make decisions about their own personal lives. But the Heavy Vehicle National Law is very clear that we are interested in the causes of fatigue, whether or not the cause arises while the person is at work.

So the message that we’re giving to our staff is that Toll workers must intervene where they suspect a driver is impaired by fatigue or otherwise not fit for duty.

I want to show you what I think is a really interesting graph, and that I think illustrates why we’ve got to be thinking more about fitness for duty. So what this graph shows is where accidents occur from point of departure, and it’s put together by NTI, which is Australia’s largest insurer of heavy vehicles. Now intuitively you would think that accidents are going to be more likely the further you get into a journey. But actually what this status suggests is that accidents are more likely to occur in the first 100 kilometres, in other words in the first few hours of a journey. So what this suggests is that the issue may not so much be time on task as it is a fitness for duty issue. In other words it’s about state of mind, the physical health of the driver when they arrived at work.

Now I think perhaps part of why this has been difficult to tackle is that the idea of the vehicle as a workplace as opposed to a personal space is still quite a relatively recent idea. And in order to try and break this down, one of the things that we’re doing is actively trying to recruit the spouses and partners of drivers as our allies in this. So we’re going to be putting together communication material for partners that aims to educate them about fatigue, about the risks of impairment by fatigue, and make suggestions about the way they can work with us and help us to keep their partners and other road users safe on the road.

Now we also recognise of course that some of these issues around fitness for duty can potentially be quite sensitive. So I’ll just list three here. The research done by Norris and others in 2000 suggested that financial issues can lead to a higher crash risk. Legree in 2003 found that heightened stress due to life events correlated with at fault crashes. And a study done by Lagard and others in 2004 found that divorce and separation is associated with a crash risk increase in the order of 4.4 percent.

Now these are sensitive, difficult issues, and our drivers will only be forthcoming with us if we work to create a culture of disclosure where people feel they can safely disclose some of these issues. Now clearly our depot workers, our managers, they’re not trained psychologists. They can’t and I can’t fix these problems, but what we can do is create an environment where people feel comfortable disclosing and where we can direct them to the very good resources that we have to assist people manage these life events.

So we have an in-house chaplaincy service here at Toll Group, and employee assistance services as well, and we’re actively encouraging their use.

I think when it comes to cultural change too, it’s really important to have peer to peer communication. I mean certainly I talk to drivers and schedulers and they’re very receptive and very helpful, but I’m not sitting in a cab driving. I can’t bring that experience and I guess that authenticity to drivers. But hearing a message from one of their own, from their peers, is incredibly powerful.

And we have an interview that runs for about 12 minutes with one of our drivers. He’s a New Zealand driver. His name is Paulus Van Zantvoort. And Paulus was involved in a very, very serious incident whereby an oncoming truck driver had fallen asleep at the wheel doing about 130 kilometres an hour and hit Paulus’ vehicle. And Paulus was extremely lucky to survive. Unfortunately the oncoming driver did not survive that incident. But Paulus talks very candidly and very powerfully about how that incident has affected his physical health, his family life, his mental health and how it has really made him rethink the dangers of fatigue. At one point he makes this comment where he says ‘I always thought I was bullet proof, six foot five and bullet proof, but it’s not the case’. And we’re finding our people are really receptive to that peer to peer communication.

Okay. I will pause again at this juncture and take some further questions.

**Jerome Carslake:**

Excellent. Thank you Sarah. I’ve got a question here from Fred.

*Q: Early reviews of the fatigue laws suggest that rest at home is not beneficial because the potential for life to intrude. What is Toll doing to avoid these factors affecting drivers?*

**Sarah Jones:**

That’s interesting. Most of the research that I’ve looked at suggests that a driver is more likely to get restorative rest if they are in their own environment at home. And it’s for that reason that in some of our line haul businesses we have a shuttle run system whereby the drivers change along the way but the freight keeps going. But certainly interested in looking at any material that suggests differently.

**Jerome Carslake:**

I guess in that case it sort of depends on how things are changing in that driver’s life as well.

**Sarah Jones:**

Absolutely. Yeah. You’re right.

**Jerome Carslake:**

Mark asks here:

*Q: How successful have you been in breaking down that toughness culture? How have you found engaging with the drivers? Are they really buying in to the journey?*

**Sarah Jones:**

You know, I can probably give you a better informed answer if you come back to me in another two years and ask me that question. For the moment I will say I’ve found people to be receptive in talking about these matters. We’ve got a two pager that basically summarises those myths and the reality, and I keep saying to people ‘Does this resonate with you? Do you recognise our workplace in this,’ and they all say ‘Yep. Absolutely. There’s material in here that I can use to tackle these ideas’. So again cliché, we’re on a journey with it. Check in with me in another two years.

**Jerome Carslake:**

Mark just shot me a quick follow up comment saying here:

*Q: Thanks Sarah. I only ask because I’m up against the same culture and we started with engagement similar to you.*

So it sounds like you’re certainly not on your own there.

**Sarah Jones:**

Not good. Best of luck.

**Jerome Carslake:**

The next one here.

*Q: The idea of safe driving plans is good in theory, but in practice traffic delays, detours and other impediments will often not allow the plan to be put into practice. Ultimately the drivers need to have full awareness of his work hours and follow a set fatigue rule set. If it says pull over to rest, then rest irrespective of the safe driving plan. Your thoughts?*

**Sarah Jones:**

Yeah. Look, completely agree. The safe driving plan is a plan. It’s not set in stone and it’s not intended to be. It doesn’t replace the need for the driver to make decisions based on how they’re feeling and the level of risk they feel they’re at in terms of impairment by fatigue.

But I think part of the value of using a safe driving plan is if that driver is on the road and they discover that there’s a change for example to traffic conditions or road conditions, then at the completion of their journey they need to be relaying that information back to the schedulers so that the schedulers are taking account in the next safe driving plan they do for a driver on that same route. So I think it’s really a consultative process, an iterative process, and that’s to me the value of the safe driving plan.

**Jerome Carslake:**

And that one was from Fred, and he just went on a bit further to ask:

*Q: Another problem is that safe driving plans do not consider the specific driver’s past fatigue history, how many hours they have in the safe driving plan.*

**Sarah Jones:**

Well I mean I think that certainly in the safe driving plans that we use we ask the driver ‘How many hours do you have in the bank?’ We don’t take it for granted that they’ve always got 12 hours. Now for the drivers that work for us, our employee drivers, that’s easier to manage than when you’re using sub‑contractors who you might not see all the time. You might not have a good sense of the nature of the work that they’re doing, and this again is why I think it’s so imperative to have systems around sub‑contractor management.

**Jerome Carslake:**

And there’s another question here, just asking about the GPS monitoring of sub-contractors.

*Q: How well resourced are they to deal with the data and actually successfully using that tool?*

**Sarah Jones:**

It varies. As I said, we have that requirement for our captive sub-contractors, and broadly speaking we’ve found that it works fairly well.

**Jerome Carslake:**

Excellent. Last one before moving on is from Frank. Frank’s asking the question:

*Q: How am I going to be driving along and where do I find sufficient parking positions, parking spaces for the heavy vehicles? It’s all good to manage my fatigue, but where can I stop?*

**Sarah Jones:**

Frank, a question after my own heart. So back in 2012, I think it was Nat Road did an audit looking at the sufficiency of driver rest areas around the country. And they found that we’ve got a deficit of about 22,000, which is an awful lot. And I think we’ve really got to invest more fully in making sure that there are places for drivers to pull over safely, to take restorative rest. In fact that’s one of the reasons why Toll Group has invested in their own purpose built residential facilities, was recognising the insufficiency of these driver rest areas.

On an ancillary note too, I think we’ve got a burgeoning problem in terms of competing for space with Grey Nomads, so the individuals who are doing the post-retirement tour of Australia – and good luck to them – but they’re also utilising these spaces and are probably more inclined to be using them in terms of a social space as opposed to our heavy vehicle drivers who are looking at them as an opportunity to rest and recharge and manage their fatigue. So I think there’s a bit of a conflict there.

**Jerome Carslake:**

Last question before we move on. Thanks for all these questions coming in. Stuart here asks:

*Q: What mitigations are required for a two up arrangement, or should it just be done seeing that the proximity of the drivers and the quality of the rests seem questionable?*

Sorry, just not be done.

**Sarah Jones:**

Yeah. Look, that is a really interesting question. I don’t have a definitive answer. What I hear is that there’s two schools of thought on this, and one is that the camaraderie that you get when you have a good two up driving arrangement, the sociability, the communication, that can actually help manage fatigue, and of course you’ve got this additional resource. The other side of the coin is well is a sleeper berth the best way of getting restorative rest, I mean especially if you’re travelling along an unsealed road. There is actually no requirement in the Australian standard for air-conditioned cabins. So I think a lot of it depends on the environment in which you find yourself. So yeah, I don’t know the answer to that question.

**Jerome Carslake:**

Did you say there’s no requirement for air-conditioned cabins?

**Sarah Jones:**

I believe so. Yes.

**Jerome Carslake:**

Wow.

**Sarah Jones:**

That that is actually not part of the Australian standard.

**Rosemary Pattison:**

Interesting. Alright. Thanks Sarah. Let’s move on to your final key messages.

**Sarah Jones:**

Okay. And thank you everybody for the fascinating questions.

Okay. So where have we landed? Well the feedback I got loud and clear from within the business was that when I developed a new standard I had to make sure that it was short, sharp and punchy. Our previous standard ran for more than 20 pages, and operational staff said to me ‘Look, if you want operational staff to read something, you’ve got to make sure that it is unambiguous and able to be read in a short sitting’.

So our new standard runs to three pages, is extremely concise, and just really hits the key marks on what people must do and must not do. But that is supported by much longer guidance material. And what we’ve tried to do with this guidance material is tell a story in a narrative sense about the importance of fatigue management, about what can go wrong if we don’t manage it, about the long term health risks.

We’ve also used the guidance material as a one stop shop for all of the various fatigue rules and laws across the country so our people don’t have to keep going looking in diverse places for the rules. They’re all there for them hyperlinked.

What we’ve also done is taken all of the material we’ve found about how specific fatigue risks can be managed and documented them in this little booklet so that our people out there in the depots can go and have a look at that, see what might be applicable to their business, and say ‘Okay. I can apply that. That sounds useful’. So it’s really material that provides the current state of knowledge about key fatigue risks and potential mitigation strategies.

Now on top of that we have introduced a new requirement that all of our business units need to have their own specific fatigue management procedure. And the reason we came to this conclusion has got to do with what we know about fatigue. So let me explain what I mean.

So we knew that fatigue is a function of three things. One, poor or inadequate sleep. So how restored are you? The second is time on task or duration on task. So we know that broadly speaking most human beings will tire the longer they do something. And the third element is the nature of the task. So most of us will tire more quickly if we’re doing something that is monotonous or repetitive. So when you think about these three points in the context of transport, you begin to see that the kind of fatigue risk you might have if you’re doing line haul or long distance driving, which involves long stretches of the one task, are quite different to the kinds of risks you’d be exposed to if you’re doing pick-up and delivery work, which has the inherent stimulus of stopping, starting, loading, unloading, engaging with customers etcetera.

So we’ve gone to the business and said well, the risk mitigation that we apply is going to vary depending on the nature of the risk. And these are things like the nature of the load, the route, the customer, driver experience, sub-contractor, the fatigue risks I’ve just mentioned. And what you can do about them is really up to the business. They’re the ones who have the specific knowledge about the nature of their task. So at the moment we’ve got business units who are thinking hard about what is applicable to them.

Now I mentioned earlier that one of the things we’ve done with our guidance material is provide direction about a whole host of different mitigation strategies that won’t be applicable in all circumstances, but that we want our people to think about whether they’re appropriate. And one of them we’re recommending for higher risk businesses is technologies. And I just want to talk briefly about one of them we’ve been using, which is the driver state sensor or DSS. And what this is is a camera mounted within the vehicle that basically tracks the pupil, and in Toll’s case is configured to send an alert if it cannot detect a pupil for more than one and a half seconds, which might be indicative of a microsleep.

So if that happens, a couple of things happen. First of all the driver’s seat vibrates and there is an in-cab audio alert that sounds. It’s quite a jarring sound, but it will certainly jolt the driver awake. Secondly that material is reviewed at base. The driver is to pull over, call in to base, talk to their manager about what they’ve experienced, whether they think that they might be at risk of a microsleep or impaired by fatigue, and we’ll make a determination about where to go from there.

But certainly we’ve had quite a bit of success with this system, but I think it’s really important to make the point that the technology itself does nothing more than provide evidence that a fatigue event might have occurred or might be occurring. It doesn’t in and of itself provide the panacea. It doesn’t for example get to the root cause of what that fatigue might be and put strategies in place to provide it. But we’ve found that coupled with that piece, this technology can be really quite effective.

Okay. So where does Toll Group go from here? Well I have about 440 staff to speak to across the country. We’re doing face to face rollouts of our new standard. They’re quite interactive sessions. I always learn something new. We’ve put together some toolbox training material around fatigue, and that includes that interview with Paulus that I mentioned earlier. We’ve also developed some training material on fatigue for our drivers and operational staff, and we built those scripts in-house and we host them on our Learning at Toll site. We’re going to be doing some customer education and communication to spouses and partners of drivers as I mentioned.

We’re also very keen to share our findings with the regulators and enforcement in order to I guess inform the next wave of reform that comes through with fatigue, and also share our findings with the rest of industry through initiatives such as this webinar.

Okay. I’ll hand back to you Jerome.

**Jerome Carslake:**

Fantastic. Thank you Sarah. We have a pile of questions here to pass on to you now. So the first one is from Victoria.

*Q: The graph showing percentages of crashes due to fatigue as a function of hours driving seems to conflict with the accident distance from point of change. One shows crashes most likely to occur in the trip by distance, the other that crashes are mostly to occur later in the trip by time. Can you please explain that?*

**Sarah Jones:**

That is a really fascinating question, and I think the answer lies in those three different functions of fatigue that I mentioned. So going back to this graph, this shows that there’s an exponential increase in crash risk after about 12 hours. Now our regulatory framework in the eastern states is currently managing that pretty well by saying you can’t work more than 12 hours in a 24 hour period unless you are accredited under BSM or ASM.

So broadly speaking, the regulatory framework is managing that current risk, but what that other graph from NTI is suggesting is that we’ve got a fitness for duty issue, which is not about time on task but about restorative rest. So I think there is an underlying policy question there about whether the amount of mandated rest is sufficient, or is it something else that’s causing these fitness for duty issues.

So Victoria I don’t think there’s a contradiction in those two graphs as much as I think they’re a reflection of different functions of fatigue.

**Jerome Carslake:**

Thanks for that. Great answer. I think this sort of flows in nicely from Mark.

*Q: What tools do you provide to give visibility and education to drivers and operational ops staff on how to monitor and manage their fatigue and fitness for work outside of work hours?*

**Sarah Jones:**

So we have a section in our guidance material that talks about factors like sleep hygiene, so how to maximise your restorative rest, talks in a general sense about lifestyle factors like diet and exercise, and talks about that broader health and wellbeing piece, so you know, the importance of disclosing if there are issues occurring in your personal life that might have an on road impact and encouraging people to access the resources that are available to them in terms of counselling.

**Jerome Carslake:**

Thanks. Fiona here asks:

*Q: Is TWU involved in helping Toll get these initiatives out and encouraged?*

**Sarah Jones:**

No. I haven’t involved them to date.

**Jerome Carslake:**

Thank you. I knew this one was going to pop up at some stage. Fotius here is asking:

*Q: Is Toll planning to adopt the EWD when NHB releases it, which is planned for 2017 as a voluntary system?*

**Sarah Jones:**

Toll Group is very supportive of the concept of electronic work diaries, and I think there’s two reasons for that. The first is that a good electronic work diary is going to take the guesswork out of the system. You know, I mentioned earlier the regulatory framework here can kind of be complex and duplicative. So if you’ve got a system that is forewarning you about when you’re going to be due for a break, I think that can take some of the stress out of it for the driver.

The second thing I think is really positive about electronic work diaries is the data that they’re collecting can differentiate between the inadvertent human error, to which we’re all prone, and the systematic deliberate flouting of the rules for commercial advantage. And I think that’s a really important distinction.

I will say though that the Toll Group believes electronic work diaries should be mandatory rather than voluntary, because the risk with a voluntary system is that people who are motivated perhaps not to be transparent can continue using the existing system, whereas people who are motivated to do the right thing are probably going to be more visible.

**Jerome Carslake:**

Thank you. And Chris here is asking:

*Q: Is the driver state sensor something that is used by Toll on public roads as well, or just mining at this stage? And would there be move to mandate this technology in the full fleet?*

**Sarah Jones:**

So at the moment it is used largely on private roads, although it is in use on public roads but less frequently. Look, we haven’t mandated its use across the fleet at the moment. The approach that we are taking is a risk managed approach. So we’re saying if you feel that there is a particular risk to do with fatigue, then a driver state sensing machine might be the appropriate mitigation strategy in your business.

**Jerome Carslake:**

And Stuart’s just got a question just following on that again.

*Q: Hello. What solutions have been found to address employers’ reluctance to allow a sleep study to be done in their fleet, and is Toll doing anything around sleep studies itself?*

**Sarah Jones:**

Yeah, that’s an interesting question. I’m not going to make a comment on reluctance to do sleep studies, because I’m not sure that that’s the case. What I think is probably more likely is that operators are following the Assessing Fitness to Drive Guidelines, the AFTD Guidelines, and certainly I’m no expert on those but when I last looked at it, the AFTD was recommending using the Epworth Sleepiness Scale as a measure of the fatigue risks that might lead you to do a sleep study. And as I understand it the Epworth Scale is self-reported. So I think it might be more a function of the guidelines that we’re working within at the moment as opposed to a great reluctance to delve more into the area.

**Jerome Carslake:**

Thank you. Got a great one here from Chris.

*Q: With regards to the fatigue glasses of drivers, if he wants or needs to wear his own sunglasses or prescription glasses will they impact on the technology?*

**Sarah Jones:**

Yeah. Look, interesting question. We’ve been using DSS for some time now, so we’ve been able to iron out some of those kinks. And certainly yeah, in the early days if a driver was wearing spectacles or sunglasses, it could result in a false positive. So if it couldn’t find a pupil it was saying this could potentially be a fatigue event but it wasn’t. But in talking with people who use the system a lot in the business, a lot of those kinks have been ironed out as the system has had more smarts built into it.

**Jerome Carslake:**

And I guess this will be our sort of closing question. So I’m sorry if I haven’t been able to answer everyone’s questions out there, but time is running out. So this last one is from Fotius. He’s asking about sugar, caffeine intake, such as coffee, Coke, Red Bulls, etcetera.

*Q: Are the drivers aware of the impact this can have on them, and how does this sort of play into managing fatigue?*

**Sarah Jones:**

Yeah. Interesting. As I mentioned, our guidance material does talk in a general way about dietary impact on fatigue, and we do talk about the use of caffeine and stimulants and when and when not is that appropriate. But the advice is fairly general in nature.

**Jerome Carslake:**

Thank you very much Sarah for today. It’s been fantastic hearing about fatigue at Toll and how you’re managing it and the new approach. So thank you so much for your time today.

**Sarah Jones:**

Thank you so much for the opportunity.

**Rosemary Pattison:**

And thank you to you Jerome, and thank you for our audience for being so engaging.

[End of Transcript]