collisions and claims, license checks, in-vehicle telemetry systems, fuel, tyres, observed violations, tachographs and training to provide an overall picture of each driver, and the organisations’ risks from which highly cost effective driver and manager level interventions, such as coaching and One-To-Ones, can be developed on the basis of need.

As well as some peace of mind with regards to meeting the requirements of documents such as the UK HSE’s ‘Driving at work: Managing work-related road safety’ guidance INDG382 and other basic legal requirements such as the Highway Code or Rules of the road, if used well online programs offer many other opportunities to drive road safety a long way down the road to compliance and beyond.

When reviewing the market for online driver risk assessment tools, it is advisable to look around, and discuss the options with your insurer, vehicle leasing and driver training suppliers. Most good suppliers will also: offer dedicated support; assist with business cases; supply details of their research and predictive validity analysis; be willing to set up detailed pilot studies; provide excellent references, case studies and benchmarks; and, have the capability to integrate the types of external data described.

References

www.virtualriskmanager.net/validation provides more detail about validation studies for online driver risk assessment tools.

Improving road safety through truck visibility

By Pippa Batchelor

Technical and Regulatory Business Development Manager
3M Traffic Safety Division, Bldg A, 1 Rivett Road, North Ryde, NSW 2113
Office: +61 02 9498 9242 pbatchelor@mmm.com

Introduction
The Global Decade of Road Safety aims to reduce road deaths ideally to zero by 2020. Adopting visibility markings on heavy vehicles as in Europe, US, Canada and China could help to prevent fatal incidents on Australian roads.

Research studies
A leading university study in Germany found that more than 95% of night time accidents from the rear or side of a truck could be reduced by using outline vehicle visibility markings [1]. A truck, defined as a vehicle over 7.5 tonne gross weight, with outline reflective markings is recognised earlier than an unmarked truck. Using this visual information, a road user can deduce the likely type of the vehicle ahead, proximity and probable speed, giving them the best chance and more time to manoeuvre safely [2].

There are several other studies that provide compelling results for the introduction of vehicle markings. The US introduced mandatory vehicle markings in December 1993 to all new heavy vehicles. A study commissioned by the National Highway Traffic Safety Administration assessed the effectiveness of these vehicle markings in reducing truck accidents, with the study area covering Florida and Pennsylvania. They concluded that tape reduced side and rear impacts by up to 44% in dark conditions. The paper found that the tape was effective in all adverse weather conditions (except fog). Additionally, the study estimated the number of fatalities that could be saved, as well as other injuries, if tape was applied to all heavy vehicles. This conclusion lead to the mandating of retrospective application of reflective markings to all heavy vehicles and their trailers in 1999 [3].

Schmidt-Clausen conducted an extensive study in Europe which monitored 1000 trucks with reflective markings applied. The study concluded that reflective contour
markings on a vehicle would on average reduce rear collisions into the truck by 44% and side collisions by 37% [1].

Australian best practice

Currently, ADR13/00 refers to the UNECE104 regulation for best practise vehicle marking. In order to be compliant with UNECE104, reflective tapes must be independently tested for photometric and physical performance. They are then awarded a unique identifier number which is printed (repeating) along the length of each tape. The regulation allows red, white and yellow tapes. Fluorescent yellow also fits into the yellow colour requirements and gives additional daytime visibility benefits. The Australian Trucking Association has produced a free Technical Advisory Procedure booklet which outlines these best practices for trucks. As a basic guide, the markings should cover at least 80% of the overall length of the vehicles and indicate its full outline. As a minimum, partial markings should be applied:

Benefits

Between July 2012 and June 2013 there were 192 incidents involving at least one heavy vehicle, which resulted in 231 fatalities on Australian roads. Of these, 132 fatalities involved multiple vehicles, at least one of which was a heavy vehicle. During the same period BITRE has reported that 38% of accidents occurred at night, suggesting that 50 fatalities were linked to incidents involving multiple vehicles at least one of which was classed as a heavy vehicle during hours of darkness. If the benefits seen in the US and European studies could be assumed to be true for Australian road environments, potentially nineteen fatalities could have been avoided during that period [4].

The cost of application of reflective vehicle marking tape is dependent on vehicle type but is in the range of $250 - $500 per vehicle if self-applied. A biannual study by the National Centre for Truck Accidents looks at incidents involving trucks every other year and the claims made through NTI. In the latest 2013 report they determined the average cost of a claim was over $118,000 AUD [5].

Australian research

Australia has some of the heaviest road transport configurations as well as some of the highest speed limits. Research from other countries shows potential crash reductions of relevant crash types from the use of conspicuity markings, and estimated cost-benefit ratios have been generally positive. There is a need for more research on the potential effectiveness of improved conspicuity markings for heavy vehicles in Australia, particularly with regard to cost-benefit ratios and the many variables to consider in such calculations. However, the available evidence suggests that a significant reduction in conspicuity-related crashes is possible with appropriate application of high quality conspicuity markings.
3M has joined together with the Victorian Transport Association to ascertain the benefits of high performance vehicle markings on heavy vehicles working on the Australian network. Murray Gouldburn and FBT Transwest are fully involved in the study to help determine how the Australian road transportation industry could further reduce the incident rates.

References
1. Prof. Dr.-Ing. H.-J. Schmidt-Clausen, Laboratory of Lighting Technology, Darmstadt University of Technology: Contour marking of vehicles, final report FO 76 / 00
2. LBI Unfallforschung Austria: Viewing Behaviour Survey / 2001

Photographs showing day and night images of an FBT Transwest tanker with high visibility reflective markings.

RACV takes a global approach to road safety

Victoria’s actions and achievements were recognised by HRH Prince Michael of Kent when he presented the Decade of Action Award to Victorian Deputy Premier Peter Ryan at Parliament House, representing the State Government of Victoria, in May.

Prince Michael is Patron of the Commission for Global Road Safety and was in Melbourne to attend the Commission’s 2014 Policy and Donor Forum. He created the award in 2012 in partnership with the Commission to showcase the most significant achievements made in support of the UN Decade of Action for Road Safety 2011-2020. The award states, “The State of Victoria has pioneered many road safety innovations that are new, admired and influencing road safety policy and practice around the world.”

In light of these achievements, the following article provides some detail on the work being conducted by RACV in improving road safety.

Contact for correspondence: Robert Hogan, Manager Corporate Communications, Royal Automobile Club of Victoria (RACV) Limited, 550 Princes Highway, Noble Park North, VICTORIA 3174, Tel: 03 9790 2620

The mission is straightforward: reduce the global loss of life and trauma associated with road crashes. It is a lofty objective but not surprising considering that almost 1.3 million people die every year on the world’s roads, and another 50 million are injured. But, even with the United Nations and more than 100 countries committing to a universal strategy, the challenge is colossal.

The United Nations’ Decade of Action for Road Safety 2011-2020 is the catalyst for the nonpartisan international effort to reduce the road toll. However, it is an objective that cannot be achieved by nations alone. International agencies, civil society and industry sector organisations and businesses have aligned with governments in the historic