



# road ahead

4th Issue 2016  
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Transport  
on the move



# Transportation 2030

## Peering into the future

# DRIVING PROFITABILITY



**VOLVO'S I-SHIFT AUTOMATED MANUAL GEARBOX** maximises uptime and makes your transports more efficient. Thanks to built-in intelligence, it quickly and automatically chooses the right gear. The result is less wear and tear, optimised fuel consumption and safer, easier and more comfortable driving. Or put differently, I-Shift makes transports with your Volvo trucks more profitable.

For **MORE INFORMATION ABOUT I-SHIFT** please visit [volvotrucks.co.za](http://volvotrucks.co.za)

## VOLVO I-SHIFT GEARBOX

Volvo Trucks. Driving Progress



## HERE ARE A FEW OF VOLVO TRUCK'S OTHER TOP FUEL SAVING INITIATIVES:

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Collects data from the truck and assists operators identify where they can improve their fuel efficiency. The data from this app is calculated by using four areas:

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Is an automated manual gearbox with software that constantly monitors changes in road gradient, vehicle speed, acceleration, torque demand as well as the vehicle's weight. This ensures that you're always in the right gear at the right time. Proof of our advancement in technology is that after 12 years in market with the I-Shift, competitors are still trying to match the success we have had with the I-Shift. Through the use of I-Shift technology, fleet owners are able to save up to 3%\* in fuel.



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Visit [Volvotrucks.co.za](http://Volvotrucks.co.za) for even more info on how to use your fuel the most efficiently. See Volvo Truck's Airflow package; Genuine Volvo Service; and all the small things like the I-Park Cool (an integrated parking cooler) and the Clutchable Air Compressor (which intelligently declutches when it's not needed, so it stops spinning when its not compressing air, using natural kinetic energy from any hills on the road allowing greater fuel savings).

**Our trucks speak for themselves but they'll also speak volumes for your business, so chat to your sales executive today.**



\* Fuel savings noted are estimates as conducted by tests by Volvo Trucks and may vary dependent on the condition of the vehicle and terrain endured by the truck.





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## On the Cover

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The Chartered Institute of  
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**Going the Extra Mile**



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# INTRODUCING

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## Foreword

## I am yours, Remember



**Design me on paper and I will look like you. Spec I on your design simulation and I will retain my beauty. Forge me on the assembly line, into the truck you want me to be, and I will stand the heat.**

Every bolt, nut, steel, sound, smoke, torque, walk and faithfulness is a confirmation that I'm just a machine that talks like you talk, walks like you walk, runs like you run and above all my safety is as high as you want me to be – I am yours remember.

The day I left the plant I was married to a truck driver, the salesman made me say all the vows to a man I had never seen or heard his voice – I am yours remember. This man took me

by the steering wheel and ran with me to a honeymoon on the highway; I tried to introduce myself so I could know him better.

I told him my name is Actros, I have a degree in zero cost of ownership, I have two sisters, Axor and Atego and they stay with my uncle in the village called Unimog. My best friend's name is freightliner and my favourite holiday destination is the planet Fuso near the beautiful lakes of Vito and Viano. I said all this and he never listened, he kept on dragging me as if I was just a truck with no reputation to maintain.

We drove past the limit signs but his eye was number blind, we came across the red robots but his eye was colour blind and in a twinkling of an eye we went and smashed innocent lives out of existence and here I stand accused of murder – I am yours remember.

No man can treat me like a queen of the road unless he is trained. No man can handle the power that I produce within my belly of combustion unless he is made aware. No man can help me run with the best fuel consumption unless he is married to me, and gives me his undivided attention.

Please love me the way I do, I forsook all to be with you, day and night, on the roads that we've never seen before. I know you better than your family. I feel the pain you have when you miss your beloved family and friends because you are with me always. I hear your cry when you are clothed with exhaustion and you can't take it any longer, but we press on and deliver bread and milk to a family that will never see us – I am yours remember.

Nobody can take care of me better than a truck driver, nobody can make me famous better than a truck driver, nobody can endure my limping mode and diesel smoke and broken engine better than a truck driver. I am well respected today, across the universe, because a truck driver was my friend from the beginning – I am yours remember.

*Bheki Cele, Technical support at Mercedes-Benz*



## MiX Telematics Receives Frost & Sullivan's 2016 Telematics Company of the Year Award

MiX Telematics is a leading global provider of fleet and mobile asset management solutions delivered as Software-as-a-Service (SaaS). The company serves a range of industries and customer types, including enterprise fleets, small fleets and consumers in over 120 countries worldwide. The superior, value-driven solutions offered by MiX Telematics guarantee a rapid return on investment, particularly in the areas of fleet efficiency, safety, compliance and security.



“ *MiX Telematics has built a strong global brand by ensuring that it is constantly ahead of the technology curve by developing new and innovative products that meet market needs and provide reliability and quality. As a result, MiX Telematics has built a reputation as an industry leader in the telematics market.* ”

Ziyaad Hanware | Research Analyst | Frost & Sullivan



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## Ed's letter

## Making technology work for you



*Gregory Simpson*

**Welcome to another edition of South Africa's favourite trucking logistics magazine, as we round out an unforgettable 2016 for the industry.**

In this, the fourth and final edition of the year we'll be looking into the future for answers to our logistical challenges. Be they congestion on our highways or increasing maintenance costs on infrastructure and fuels for a cleaner future – there is certainly a lot to be excited about.

What might the travel of 2030 look and feel like? It's not that far away, but companies are already predicting self-drive vehicles

that may even take to the skies to alleviate some of the pressure on traditional road networks.

And speaking of road networks, I was lucky enough to chat to the inventors of a concept that could potentially revolutionise travel and the way we look after the environment. Roads made out of recycled plastic may be the way of the future, solving the problem of the high maintenance costs of traditional asphalt, together with providing a viable solution to the massive plastic rubbish problem we endure.

We urgently need to start looking at trash differently, as more than just a way to produce energy – which is the low hanging fruit from landfill sites – we need to see our waste as a commodity. A commodity that we have been wasting, pardon the pun.

Another hot topic, that is deep in the agenda of this particular edition, is the advancement of drone technology. The last two years has seen an explosion in the uses, and sadly abuses, of this technology. It has tremendous potential for the small parcel business and remote surveillance. My fear with drones is the safety aspect. On a recent film shoot the cameraman, who I was working with, was using a drone. However, when it flew past a cellphone tower it veered off into the bushes. So by no means believe that this is fail-safe technology. But then for that matter, can you call any technology fail-safe?

So as we peer into a future that may not seem as distant as before, what can we take out of a technological revolution that enhances our lives at work and at home, versus any negatives that may exist? Certainly, the logistics industry of 2016 is greatly enhanced by technology, from a variety of difference avenues. The logistics companies of today would run rings around previous generations, but we need to ensure that technology works for us.



# The new ECO Plus 3 is here.



## New Hub Design

- Continuous hub flange
- Standard ABS exciter ring with 90 teeth



## Optimised sealing concept

- Enclosed bearings with multi-sealing system
- New seal design
- Exciter ring is part of the sealing system
- Hub cap with proven screw connection and service friendly torque



## Improved axle nut

- Only one axle nut for all axles from 9 to 12 ton
- Optimal adjusting through improved axle nut with integrated torque limiter

The New 9 ton ECO Plus 3 replaces the current 9 ton ECO Plus 2 version for single wheel application. All dual wheel applications remain with the current 10 ton ECO Plus 1 axle design.





# Road to the future?

The road of the future may look nothing like today's offerings. Researchers in Holland are cracking the code on a revolutionary plastic road, which may be headed to Africa in the future. We have the exclusive.

**Greenhouse gases aren't just generated by cars travelling over roads — asphalt roads themselves aren't so great for the environment. The plastic road concept consists of prefabricated sections of roadway made out of recycled plastic, which snap together like Lego. Hollow spaces in roads carry infrastructure like electric or fiber-optic wire.**

Installing a plastic road is much simpler than laying asphalt, mostly because the road surface is fabricated offsite. Workers dig a road bed and line it with sand or aggregate, then lay down the road in sections 5 meters long and 2.5 meters wide. Repair

is equally straightforward — a damaged section of road can be replaced in minutes, according to reports. Although asphalt is recycled at a high rate, it's a petroleum-based material, and its production can hardly be described as green — the Environmental Protection Authority (EPA) estimates that an average asphalt plant emits up to 41 000 pounds of carbon monoxide and up to 31 000 pounds of particulate matter per year, not including the impact of extracting crushed rock. Asphalt is also less durable than you might think — the top layer of an asphalt road must, at best, be replaced every 20 years.

The find out more, Gregory Simpson, went global and got hold of the inventors/engineers, all the way in sunny Holland — Anne



**Can you tell me a bit about your background in engineering and something about the inspiration behind the Plastic Road Project?**

Anne Koudstaal: I'm a civil engineer, I have studied water management. Simon and I actually brainstormed what the future is going to bring us and it's all kinds of problems. We tried to find a solution for every problem and that's how the plastic road was born.

Simon Jorritsma: My background is interfacing management, and I'm doing research on sustainability within KWS Infra. I'm looking at sustainable products, ways of getting asphalt more durable – in short, that's my background.

**What's some of the design that goes into to making plastic roads and some of the environmental savings?**

Anne Koudstaal: We were looking at the current issues we face, like flooding of urban areas, cable and piping in the Netherlands. The ground is full of cables and pipes, you can't put a shovel in the ground anymore or you'll hit a cable or a pipe. We also have a lot of sediment, which causes the ground to sink in the Netherlands, so we have to find lightweight solutions. We also see a big problem with plastics, and of course the plastic waste. We put all those issues on a big mountain and looked at what kind of design is able to face all those problems or solve all those problems and that's how the plastic road was born.

“They want to try to see if it's possible to use their garbage, collected in their municipality, in the roads they are going to lay – that is the ambition”

**There's been a lot of comparison with Lego; did you take some inspiration from that?**

Anne Koudstaal: Yes a little bit, it's like pre-fab, we make it in a factory and then we transport it to the location where we have to install it. If you make it like Lego in a factory you can make sure the quality is equal to all the products – so that it installs quickly and easily.

**Are these roads able to handle weather changes, storms, flooding and hurricanes better than traditional roads, even if you have all the electronics under the road?**

Anne Koudstaal: Yes, that's the idea, but we don't know if it's going to be all the electronics. The specific road has a space and it can be used for electric cables, but we have to see what kind of electric cables can be put in.

**How many years away are you from this becoming public, could you predict?**

Anne Koudstaal: Well we hope to have our first pilots outside at



Anne Koudstaal and Simon Jorritsma

the end of next year, and from there we have to develop a plastic road for public use.

**The lifespan, a traditional road has to be replaced up to 20 years, how long will these plastic roads last?**

Anne Koudstaal: Well that's a thing we have to do some research on, but we expect it will be two to three times longer than traditional asphalt; it would depend on the use of the road.

**And the benefit when it comes to repair and maintenance?**

Anne Koudstaal: Well it's pre-fabricated so when one element

is damaged it can be replaced very quickly. We think it's going to take just 10% of the fraction of the time it takes to construct a traditional road.

**And what would this mean for logistics in 5, 10, 20 years time down the line if this really takes off?**

Anne Koudstaal: For transport we calculated that when the concept is a reality it's going to mean that 85% less transport is needed for plastic road elements, when compared to a traditional asphalt road.

**And recycling is obviously a massive part of this – how do you increase your recycling to make this effective?**

Well in Holland we recycle a fair amount of plastics, all households separate their plastic and it will be collected, separated and collected by municipalities and then recycled.

**What sort of reaction have you got from investment companies and government to this proposal?**

Anne Koudstaal: Very positive reactions from all over the world and especially from municipalities, because they really like the idea and want to try to see if it's possible to use their garbage, collected in their municipality, in the roads they are going to lay – that is the ambition.

**The sky is the limit, so what will that mean for the planet in terms of reduction in waste?**

Simon Jorritsma: If we can use total mixed waste and we don't have to use new materials then plastic waste is getting an enormous boost. People like to collect because they can get some money for it. That's the biggest case. At the moment most of the plastic waste is used for energy and it has a rather low value. If we can put it in plastic roads, or use it for other purposes plastic waste will become more valuable, particularly because of the big amounts we have to use.

**Would you say that there should be legislation that every piece of plastic has some kind of recycling value?**

Simon Jorritsma: Yes.

**We're very far behind in South Africa in the recycling stakes and particularly in recycled tyres – is there room for that in alternative roads?**

Anne Koudstaal: We haven't looked at that yet, our first focus is to do some research on the construction and the use of different kinds of waste plastic. We have to optimise the amount of waste plastic in plastic roads and after that we can look at other resources. Maybe if there are other possibilities of use for the plastic road then maybe we can use lower quality waste material. For the recycling of our roads, it has to be a high quality because it has to carry a car over it.

**Absolutely, and in terms of trucking is there a weight restriction on how much weight these roads can take?**

Anne Koudstaal: We now calculate with an axle load of 15 000 kilos, 15 tons.

**The really big trucks wouldn't be able to use the roads at the moment?**

Anne Koudstaal: That's true, we now focus on urban areas and you have mostly cars and smaller trucks driving over it and they are about 15 tons, like a fire truck, that kind of vehicle.

**And would it be possible to make it thicker and more durable for a highway application?**

Anne Koudstaal: Yes, that's a possibility.

**And in terms of finance, presumably it's cheaper than asphalt?**

Anne Koudstaal: We think so, it can save water over a sewage system, so you don't have to have separate rainwater sewage. In the Netherlands we have a lot of damage to cables and pipes during infra-works, which means everybody has to be out of electricity or gas or water and costs are increased. When the pipes are in the plastic road this will be less. Regarding maintenance there will be less traffic hindrance because replacements are much quicker, and the cars don't have to stand in the traffic.

**If there is a flood what happens to the road, does it rise or how does it work?**

Anne Koudstaal: The idea is when there's a lot of rain the plastic road has a gutter system so the water is going into the hollow space. The hollow space can be totally filled and the sides and underneath the plastic roads act like an infiltration unit, so the water can infiltrate into the ground.

**Absolutely and then attaching that to a grey water system so you can capture the water from the roads?**

Simon Jorritsma: We are looking at a different version of the plastic road, which can store the water so that you can use it for different purposes like irrigation of lands and that kind of stuff.

**And have you had much interest from Africa, because I'm sure this could solve a lot of problems?**

Simon Jorritsma: We've had some reaction from Africa, different countries, but also from South Africa.

**And in terms of manufacturing, is this something you could take around the world and manufacture wherever you wanted to?**

Simon Jorritsma: We hope so, but we first have to find a production facility, there isn't one existing at the moment.

Anne Koudstaal: And before we can finance a production facility we have to complete the designing of the plastic road –

the production facility will be a huge investment.

**Presumably you have to map the entire city before you start building the roads?**

Anne Koudstaal: No, it's more like the elements have to be just right because you have to make a mould and every adjustment you want to make to the plastic roads means you have to create a new mould.

**So how many different moulds would you need?**

Anne Koudstaal: We have to have something like three or four; you also have to have different kinds of curves and that kind of stuff.

**Absolutely, a lot goes into it. In terms of job creation there must be a job creation benefit if this really takes off?**

Anne Koudstaal: Well we haven't looked at job creation but that will be a factor, especially in the recycling business – there could be a huge creation of jobs. It's an extra benefit, we haven't thought about that yet.

**In terms of recycling in Europe what's the biggest lesson Africa can learn from that, where there's not much recycling happening at all?**

Anne Koudstaal: The thing that Africa can learn is not to spill the plastic into the environment because that's the biggest issue we have to face. The Netherlands was also a big polluter of plastic in the rivers, but since we started to recycle and use the material in other products we see a better collection of waste, all kinds of waste, and that's a big issue for The Netherlands. And what Africa can learn is that waste and particularly plastic waste has a value, you have to see it like a resource not as waste, yes, that's the most important thing.

**Theft is a big problem in Africa, how secure are these roads from somebody trying to steal the road or the piping underneath the road?**

Anne Koudstaal: That's a thing, you can steal the roads, they are 4 000 kilo's, if you want to take it on your back it's quite heavy.

If you steal some of the elements what are you going to do with it?

**Holland is a leader in sustainable design, what is the reason for that?**

Anne Koudstaal: We don't have natural resources so we have to find solutions to make it cheaper, to do it with products that are already being used. That's one of the main reasons we are quite far ahead.

*Gregory Simpson*



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# Drones:

## A security perspective

**Drones, UAVs, UAS, RPAS – whatever terminology that you may use – unmanned aerial vehicles are becoming more and more popular, not just for use by hobbyists who like to fly them on weekends, but for commercial purposes.**

**The commercial use of drones ranges from aerial photography and filming, to being used in anti-poaching operations, aerial surveys, crop spraying, wildlife and other forms of monitoring, parcel delivery, delivering of medical supplies to remote areas, evaluation of fire scenes and incidents and surveillance.**

Major retailers such as Amazon, are experimenting with drone technology for the fulfilment of orders in their larger warehouses, as well as looking at the viability of utilising drones to do deliveries. Large industrial plants are investigating the use of drones for spare parts logistics. Drones have been used to deliver blood and other essential medical supplies in hard-to-reach rural areas in countries like Rwanda.

Delivery options such as these, if they become a viable option for urban areas, can increase the speed of deliveries, as well as saving resources and streamlining processes.

There are infinite applications, which are limited only by the technology that is currently available.

Drone technology has many benefits when used in a positive manner. But like most technologies, there is a dark side to it as well. The most common “negative” use of drone technology that is prevalent is the use of weaponised drones in warfare, as well as drones that have been used for espionage.

Criminals are also embracing drone technology. There have been reports of drones being used to smuggle items into prisons for the prisoners. In the UK, criminals have attached thermal imaging cameras onto drones to pick up the heat signatures of their rival’s marijuana farms, so that they can steal from them.

There is also what is known as “narcotics drones”. These are drones that are used by drug dealers to smuggle drugs over the US/Mexican borders.

Closer to home criminals can use drones to identify potential targets for robberies, of both commercial and private properties.

The word “drone” has a negative connotation because weaponised drones have been used in warfare by various countries, so the preferred name is Remote Piloted Aircraft Systems (RPAS). This definition encompasses the wide range of RPA systems that are available, from miniature units that can fit into the palm of your hand to larger fixed-wing units with wingspans of more than 1 m.

### Risks involving RPAS

But with every technology, there is some element of risk. The military potential for destruction and the criminal element have already been highlighted, but the risks involving RPAS for the civilian user are just as high.

### Injury to the public

RPAs can be very dangerous if not operated safely. Multi-rotor RPAS units have very sharp carbon fibre blades that can cause injury if they come into contact with a person. There was a case in England where a toddler lost an eye due to being injured by the blade of a RPA, that was being flown in the backyard of the house.

Most RPAs are powered by a rechargeable lithium polymer battery. As the recent Samsung Galaxy Note 7 incidents have illustrated, lithium batteries can be very dangerous, if they are



Nicole Alexander, Professional Aviation Services Cape Town branch manager

not manufactured or handled correctly. The lithium polymer batteries that are generally used in RPAs are large and very powerful. If these batteries are not managed properly, they can be damaged and the damage to the battery can cause it to explode or ignite.

Besides the safety issues surrounding the RPA itself, other risks from the negligent operation of an RPA are the following:

- **Collision with other aircraft, with possible fatal results**

There are frequent reports from around the world of pilots reporting RPAs flying near their aircraft when coming into land. Besides the blatant disregard of the laws stating that RPA units should not fly within 10 km of an aerodrome, this is very dangerous. If the RPA had to strike the aircraft at a critical point while landing, and get caught up in an engine or wing flap, there could be disastrous consequences for the aircraft.

Other risks include damaging people's property and legal liability for breaking laws, such as privacy by-laws and laws enforceable by other authorities.

- **Minimising the risk**

So, how can this be prevented? Firstly, by implementing specific legislation with regard to RPAS, and secondly by educating the public about the risks and rules regarding the use of RPAS.

South Africa is one of the first countries in the world to introduce legislation with regard to the operation of RPAS. With

the rapid growth in the RPAS industry and the increased use of RPAS for commercial applications, legislation is necessary to ensure the safety and security of everyone who shares civil aviation airspace.

### Regulations

The regulations that govern the operation of RPAS in South Africa became applicable in July 2015. These regulations cover the use of RPAS for commercial operations, corporate operations, non-profit operations and private operations.

### Private operations

With regard to operating RPAS in South Africa, if a person operates a RPAS unit for their own use, it may only be used for an individual's personal and private purposes where there is no commercial outcome, interest or gain. The pilot must observe all statutory requirements relating to liability, privacy and any other laws enforceable by any other authorities. It is also a requirement that those that sell RPAS display notices and inform buyers of the basic regulations as it applies to private and other uses of the systems that they sell.

### Commercial operations, corporate operations or non-profit operations

If an entity or a person is operating a RPAS for commercial operations, corporate operations or non-profit operations, the RPA must be registered and may only be operated in terms of Part 101 of the South African Civil Aviation Authority (SACAA) regulations.

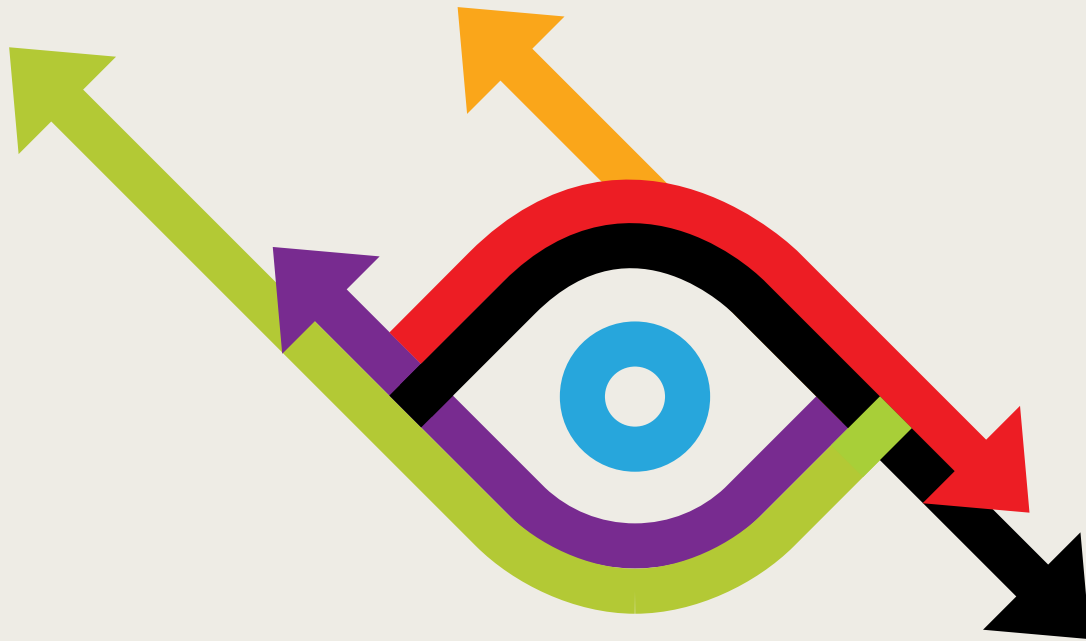
The reason that individuals make mistakes or inadvertently break the rules is that they are not aware of what the risks are, or the potential threats. Therefore, one of the mandatory requirements is that all personnel employed in the deployment, handling, and storage of RPAS need to undergo aviation security awareness training, as detailed in Part 109.

Professional Aviation Services has been involved in the aviation industry, in one form or another, for the last 35 years. They specialise in offering risk services in terms of compliance, aviation security consulting, training and aircraft sales.

They are passionate about educating and equipping people, and they are an approved aviation security training organisation. They offer the only SACAA approved aviation security awareness training course designed specifically for RPAS operations.

In terms of mitigating risk and increasing security, education is key. The correct application of the regulations, the ongoing education of the public and the safe operation of RPAS, will go a long way in keeping the skies and people safe. This will create an environment where the use of RPAS technology, to solve problems, can become a reality.

Nicole Alexander



## It's easier to manage risk if you can see what's around the corner.

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**Safety.** It's what drives us."





# Speed kills -right?

**When it comes to speed, speeding or the slogan “speed kills” everyone has an opinion. Just ask any “expert” at a Friday night gathering around any fire or bar and you’ll have as many opinions as you do people present. There are some pretty convincing arguments either way, if you are sober enough to listen to the self-imposed expertise of all those around you But what if you really are an expert.**



**If you have ever gathered around a fire with Stan Bezuidenhout, a forensic road traffic collision reconstruction expert from IBF Investigations, you're likely to be in some pretty good company when it comes to expertise in this field. Now, we're not just talking "maths" here. Stan has experience that reads like a who's who of road traffic collision analysis. Having personally attended thousands of crash scenes – more often than should be the case involving speed and even illegal street racing – he knows a thing or two about the aftermath of these types of collisions. He is also one of the leading experts in South Africa when it comes to the actual discipline of reconstruction – the analysis of collision as a function of evidence, dynamics, energy, forces and effects. As a reconstructionist, it's his job to assess damages, consider dynamics, measure crush, calculate forces and make determinations about cause. He then testifies to the causes in court, and he is well known for it.**

So what would a real-world expert with experience in many countries, many disciplines, many courts and many cases have to say about speed? Would he agree that speed kills? Would his experience lead him to a natural conclusion that many would share? What would his thoughts be on speed enforcement? Would he be able to say how big an issue speed really is, when it comes to the unacceptably high rate of carnage on South African and many other African roads?

We had opportunity to ask Stan exactly this and here is what he had to say:

“(Giggles)... Well, you will probably be shocked to hear me say that I completely and utterly disagree with all current opinions on speed and speeding on South African roads. I cannot for one moment believe that you can blame speed for anything, since it is nothing more than the movement of an object within a defined time period. We refer to it more often as velocity than speed, when considering it in a scientific frame of reference. But the fact is that I have two opinions. I have a personal one and I have a scientific one.”

Stan leans back, relaxes, but his eyes glow with focus. This man can think on the fly, he has a plethora of facts right at the tip of his tongue and he loves this stuff. His passion is contagious ...

“On a personal level I fully understand that the slogan speed kills could be used to promote road safety. It's short, it's catchy and it flows off the tongue rather easily. You can share the thought on almost any platform and in any medium quickly and, as far as lay references go, it seems credible. But it's nothing more than a good marketing slogan. The problem with placing marketing people – business people – in charge of creating a campaign slogan that will effectively address road safety awareness is that you will get results. Sales. Awareness. Repetition. Buy-in.

As a marketing strategy, it's brilliant. We're at the stage now where everyone knows speed kills. It's become an accepted rule, almost. And here comes the sale part: If everyone knows that SPEED kills, and then surely knows that we must enforce not SPEEDING and therefore fines – the sale – is justified and even supported. People have bought into the product.”

OK, wait. If Stan is a crash expert, why is he now talking about marketing and business as if he knows more about that or considers it a bigger issue? Well, Stan also studied hypnosis, handwriting analysis, cognitive interrogation and associated psychology and he is auto-didactic (we didn't know what it meant either). An auto-didactic is someone who studies without the need for tuition and gains knowledge to an equal or even higher standard than those tutored in a particular field. But we digress and Stan carries on ...

“I know this sounds counter-intuitive. I know that the slogan has become so popular and the content seems so logical that people no longer even think about the validity or the implications of the slogan. But you could not be more wrong. Speed, as I said, is a function of space over time. Nothing more, nothing less. In order for the slogan to make any sense, it should include reference evidence and exclude the contrary. Simplifying it and trying to make speed the villain – often at the expense of other more dangerous road transport infringements – is actually irresponsible. I am waiting for someone to prove to me that a reduction in speed necessarily results in an improvement in road safety. Now don't get me wrong – I'm not talking about the relative speed of a car, as a function of traffic friction here. I'm talking about speed in isolation.”

**“Imagine a country where  
the law is designed to  
empower and enrich people  
– not govern and intimidate  
them”**

Wait what? Traffic friction? That's a term we've never heard before. We interrupt Stan to ask about this. Sounds like insider jargon that has nothing to do with the actual topic of discussion. Stan smiles again. We can literally see the cogs turning now. We've touched on a subject that he is passionate about.

“Traffic friction is not just a general term. Oh no. (That smile ... Is he mocking us now?) Traffic friction is a term that describes a very specific set of road transport movement dynamics. Let me simplify it. (Oh ok, he's not mocking us. He's just enjoying the opportunity to explain). Think about peak hour traffic with

lots of cars heading in the same direction. Scientifically, they should all move at the same speed – probably the posted speed limit – and simply proceed without incident, unless something substantial happens. Now you have one guy who is on his cell phone. He slows down to concentrate on the call. Now others start to slow down and it cascades rearward as everyone responds to the changing traffic pattern up ahead. Some people start changing lanes to get past slower traffic and this causes more cars to slow down.

“Because there is now a gap ahead of him, more start to change lanes to essentially exploit this space. Traffic friction interferes with the smooth flow of vehicles on a road. There are many things that cause traffic friction. A good example is road use psychology. Some people consider themselves safe drivers – they drive below the speed limit if they think it makes them feel safer. Others are in a hurry, so they exceed the speed limit. Other have nice cars and enjoy speed, so they drive faster. Some are

distracted by cell phones and are therefore distracted and either driving slower or venturing out of their lanes. Vehicle design differences – trucks versus light motor vehicles – also contribute. Some people drive at the speed limit and brake and drop well below it every time they see a speed camera or traffic officer. Traffic friction. Everything that causes an interference in smooth traffic flow.”

We have to interrupt Stan here. He tends to get a bit passionate. This is an article about speed, after all ... He gets back on track...

“To get back to this speed kills business – essentially, speed as an isolated element of traffic movement does not kill. If this were true, racing drivers, pilots, astronauts and everyone achieving higher speeds should be killed more often. But we all know the opposite is true. Race tracks can easily be described as the safest places for drivers to be. True – they all drive in the same direction and they’re all more experienced, alert, focused and

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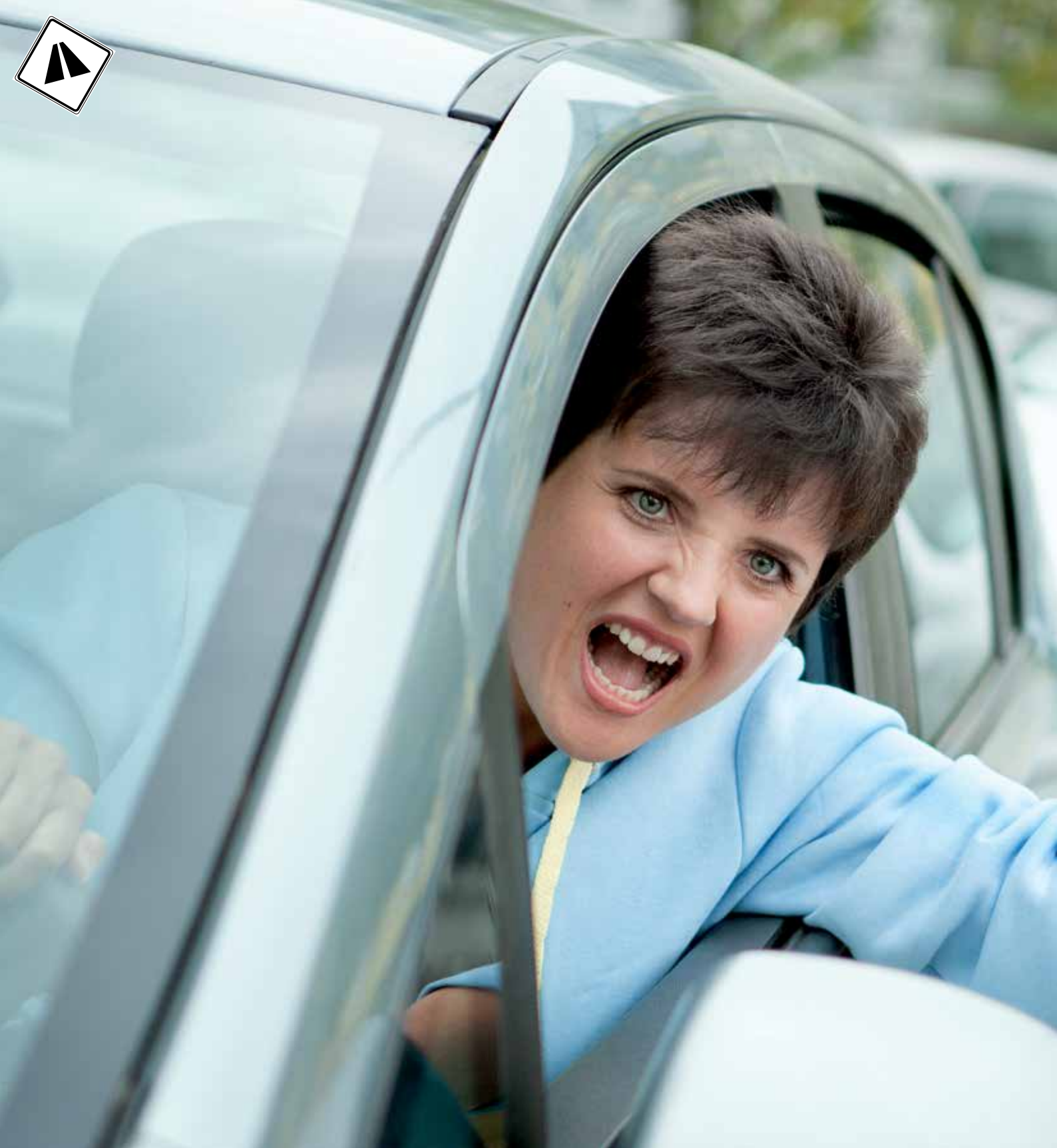


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skilled, but you get the point. For the slogan to be both accurate and relevant, it should probably be changed to a greater change in velocity results in more serious injury.

“Sure – that’s not a great example as marketing slogans go, but it is certainly more accurate. When it comes to crash analysis,

the severity of the collision can be divided into two aspects: the change in velocity – called Delta-V and the results. When an object changes from one velocity to another within a specific time period, that rate is expressed as Delta-V. The change in velocity, over time. The more severe the Delta-V, the greater the

amount of energy involved in this change. This is why falling out of the sky from 3 000 meters onto a big catch-net does not kill, while falling on concrete from just 30 meters does. The rate at which you are slowed down – not the speed at which you were moving.

“As far as results are concerned, any serious or incapacitating or fatal injury is relevant. A 30-ton truck rolling back at 40 km/h and crushing a man against a wall and a 300 kg motorcycle striking him at 100 km/h could both result in a fatality at vastly different speeds. So no. Speed, does not kill. Energy does. Momentum. And the rate of change from one velocity to another in collisions. This can also be positive or negative: you can strike something and decelerate really quickly or get struck from behind and accelerate really quickly – change in velocity. The propensity for something to want to keep moving until something stops it or stay still until something starts moving it, is contained in well established natural laws; Newton’s laws. Whether we consider the mass and velocity of the truck or the motorcycle, one thing is a certainty: while the motorcycle killing someone would be considered proof that speed kills, the truck would have done exactly the same but the slogan no longer seems appropriate. Speed kills is therefore a subjective reference and by design, flawed.”

We’re now getting dizzy. Energy, joules, velocity, Traffic friction and all this slogan talk. We ask Stan to get to the point, and he does as he continues but there’s just no end to his passion and we’re becoming quite inflamed by it now...

“Take speed law enforcement. If you accept the slogan speed kills as a fact, you have a short route to the next level of logic: More speed kills even quicker and less speed kills less. Ergo, let’s clamp down on speed. Let’s focus on speeding. In order to do this, we need to define some parameters, right? That’s easy: speed limits. Let’s say people are just not listening and too many people are dying on a road with a speed limit of 60 km/h. We start introducing speed cameras and we get really tough on offenders – we start issuing fines of higher value, adding demerit points and start arresting people. That should work, right? Not so much, if you look at most results. In almost every case where there is an increase in speeding fines, there is not a proportionate decrease in the offense rate. That’s because of a concept called the 90th percentile. It refers to the way 90% of people would act on a particular road. The trend, as it were.

“People tend to act in a way that seems socially acceptable or prevalent rather than in a way that is necessarily legal. If everyone is misbehaving, more people are inclined to do the same. There is research that showed when people are waiting at



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a red traffic light, more people are willing to cross against the red if a person in a business suit does so first than if a person in plain clothes does. We follow trends. Human psychology is infinitely more complex than mere legal restraint would imply. Take the change from apartheid to a democracy as a speaking example of the power of group mentality and civil disobedience. The e-tolls is another example of the power of group influence. No matter the sphere of reference, the old bigger stick argument simply does not work if there is no carrot at the other end.”

Stan is now getting somewhere and we’re starting to wonder if he’ll accept an invite to our next office braai. This is a guy you want around the fire.

What are his thoughts on other things? His thought processes seem so well defined. Now we’re getting passionate. We nod attentively and allow him to carry on...

“If you take children in school as an example and compare it to the prevailing efforts in road safety, you will immediately see the dichotomy we’re faced with: During your whole school career and upbringing, there’s no corporal punishment, almost every form of discipline is considered to be torture or abuse and children are taught to just try harder next time. If schools were run like road safety campaigns, it would sound something like this: Children, we’ve repeatedly told you that you must arrive at school at 8, attend all classes, achieve high marks, sit still, listen to your teachers, wear full uniform and do your homework every afternoon. After seeing that you are not listening, we will now be taking your lunch money if you arrive late, we will not allow you to go to lunch and eat, you will have to walk to school and we will name and shame those who commit offences.”

This is a huge statement. Stan pauses and looks at us. His expression urges us to consider this comparison.

While it is totally preposterous, it really seems to be similar, doesn’t it? We are not even allowed to discipline our own children; we have to use positive reinforcement for everything and understand and nurture their individuality. At the same time, we are expected to perform in all aspects of road safety under threat of ever more serious consequences. By why doesn’t it work? Stan has the answer...

“Every research effort has shown that you can train animals, children and even adults better by using positive outcomes-based and reinforcement methods. You can teach a dog to sit by beating it until it does, but you end up with an unhappy, dangerous dog. Nothing more. There is no respect, no love, no trust and no positive relationship. Why do we refer to road traffic research all the time but we fail to agree on this one universal truth; harsher punishment is never the answer, no matter the motivation.

“Imagine a country where the law is designed to empower and

enrich people – not govern and intimidate them. Let’s call it Stanada. In this country, if you are caught speeding, you are not penalised financially. Instead, you are subjected to an immediate (roadside) training programme. You enter a facility and you are forced to watch a 1 hour documentary on the dynamics of speed in collisions. You undergo training. At the end, you write a test – and you stay there till you pass – that actually confirms that you understand the implications of speeding. This does two things: It educates reactively in a relevant sphere of reverence and costs you the one commodity that is equally valuable to everyone: time. You pass your test and you’re allowed to go. No money taken, education provided and all future excuses for speeding eliminated.

If you are now ever involved in a speed-related collision, you are immediately accountable – even if you are not the primary cause.

“Over your driving lifetime, you are likely to receive a variety of training courses, ranging from the effects of speed, to stopping at stop streets, wearing seatbelts, etc. I have huge problems with fines. It is by design unconstitutional and unfair. How is a R500 fine for a single mother of three in any way equal to one given to a business tycoon and billionaire? Oh sure, you can take away licenses, but now the single mother can’t go and get medicine or get her kids to a doctor and the billionaire can just hire someone to drive him around.

The punishment model is essentially a class-based system where the lower income class suffer while the rich enjoy the privilege.”

We urge Stan to get to the point. This is very interesting, but we want to bring him back to the issue of discussion: Does speed kill?

“No. Speed does not. If we are going to consider whether speed kills, we also need to explore how this affects people. Will truck or bus drivers act any different if they’re driving at 80 km/h? This is not really speeding as we know it, is it? I think the whole speed kills claim should be revisited and – along with it – all thought processes associated with enforcement, compliance and risk mitigation. I would say that ATTITUDE KILLS is a far better slogan and this is something we should adjust first. In Germany, on the autobahn, the collision rate is not considerably higher than on any roads with speed limits, but this is not due to strict law enforcement but rather to the attitude of the kinds of people – the culture they’re dealing with.”

We thank Stan for his interesting insights and promise to explore a follow-up argument. Stan promises that he can talk about this for days and that there are many other aspects of speed and speeding he has not even been able to cover. We look forward to hearing more. Maybe around a fire, with a beer in hand. Soon, we promise.



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# SA roads where everything goes

**As you read these words, you have a vehicle parked somewhere, maybe you can even see it from the window you're sitting next to. Quickly! You have two seconds and one word to describe it. Whatever adjective you choose to describe your vehicle, "dangerous" certainly wasn't one was it? And that is because it isn't, it's because you are!**

**September 30, the advent of TRANSPORT MONTH, saw the launch of MBSA's Fleetboard professional training programme where they are set to train in excess of 200 commercial vehicle drivers as part of their role in operating as a responsible corporate citizen.**

With over 360 000 trucks rolling over South African roads daily, the image of diabolical accidents isn't too far away. Couple that image with well known random facts: unqualified operators; under qualified drivers; inadequate traffic officials and the image instantly converts to a living nightmare.

A recent brake and tyre survey undertaken by Fleetwatch and its publisher, Patrick O'Leary, unveiled that out of 679 trucks that were randomly stopped, 485 had to be taken off the road due to not being roadworthy (that's a 68% failure), and further proved that only 7% of drivers applying for a driving position are actually suitable for driver training.

In this Fleetboard driver training initiative, which isn't only aimed at MBSA drivers, but across the OEM board, already "licensed" drivers will be trained to become "professional".

The driver will thereby become an asset to the company they drive for, as opposed to a liability.

Firstly, they will be trained how to do a 15 minute check of the vehicle before starting a trip. He/she will be made aware of how to check the tyres, licence (discs and plates), and fuel and once in the cab, further checks should be made to ensure the vehicle is ready for the highway.

**Apart from knowing when to decrease the engine speed in accordance with the load, a driver also needs to know how to:**

- Apply low engine speed
- Apply high power wherever possible
- Keep the tachometer needle in the green zone while driving

- Not shift unnecessarily but allow the engine to pull
- Skip gears where possible
- Split gears where necessary.

*Each driver will be armed with the following:*

#### **Foresighted driving**

- Drive consistently
- Avoid unnecessary stops
- Don't brake unnecessarily
- Use economic braking
- Take advantage of peaks in momentum
- Take your foot off the gas early enough (before hilltops, motorways, etc.)
- Keep a safe (3 seconds) travelling distance
- Merge swiftly into traffic
- Plan the trip's route in advance
- Avoid road issues by being up to date with traffic reports
- Avoid water-filled lane grooves
- No "full speed ahead" after an interim stop
- No gas pulse before switching off the engine
- Guide the gear lever properly
- Synchronise by using constant pressure, don't "poke"
- "Tap" the range shift, don't "push"
- Keep your foot away from the clutch and hand away from the gear.

#### **Professional vehicle handling**

- Regular maintenance and care
- Daily safety checks before trip
- Adjust tyre pressure
- Adjust all wind deflectors properly
- Fasten the tarp tightly
- Don't let the engine warm up at standstill
- Warm up the engine and power train quickly by driving with a moderate load

- Switch off the engine when stopping for longer periods of time
- Don't heat the cab with the engine idling
- Report deficiencies early
- Keep an eye on exhaust gases
- Let the engine idle for a short while after "speedy" driving.

Once all the boxes have been ticked, there is still a very crucial element that is most definitely not to be overlooked. That is the health of the driver.

Being on the road extensively, sometimes week after week, can cause serious concerns about the driver's physical and mental wellbeing.

Trucking Wellness, in partnership with MBSA, has no less than 22 Wellness Centres throughout South Africa to assist and counsel drivers.

**Apart from personal hygiene, balanced nutrition and exercise, there are other hidden factors that contribute to the health and wellbeing of the driver, which include:**

- Alcohol and substance abuse

- Gender based violence
- Influenza
- Hypertension (high blood pressure)
- Cholesterol
- Diabetes
- Tuberculosis
- Sexually transmitted infections
- Human Immunodeficiency Virus (HIV)
- Thrombosis
- Mental health

Reviewing the above screams out that there is one thing left overlooked ... guess what it is? It's the cell phone! Despite all efforts under taken by law enforcement, social media and viral videos, drivers (of all vehicles, not just trucks) tend to be "controlled" by the cell phone, which takes their attention off the road while driving. I leave you with the wise words of Dr Sujen Padayatchi of ASPEN Logistics: "Lots of money is spent on up-to-date trucks often forgetting that the most valuable asset is actually the driver".

*Linda Smith*

*Photos: courtesy of Fleetwatch*





# Smart solutions for customers' business sustainability

With UD Trucks' ability to adapt means  
that the future of the brand is bright

**Gert Swanepoel, acting vice president of UD Trucks Southern Africa said, "Underpinning this is the stability of balanced product and support offerings which are founded on our Japanese heritage of quality, engineering and progressive product to complement our customers' unique business requirements. This, combined with the in-depth knowledge and expertise of the UD Trucks dealer network, provides customers**

**with access to a sustainable all-round transport solution provider."**

One of the ways in which UD Trucks is embracing innovation is through its telematics system which was introduced as part of the UD Quester range in March 2015. This technology has already had a profound impact on the profitability, uptime and security of some major UD fleets in the country. Reports from



current fuel consumption and if they are driving at the optimum speed and gear in order to ensure the best efficiency. Fuel Coach is also able to advise the driver which corrective action to take in order to get back into the so-called sweet spot of performance.

“Recognising that a truck driver is any fleet owner’s most valuable asset. UD Trucks therefore offer product-specific driver training to ensure that customers get the best fuel efficiency, productivity, safety and uptime from their UD fleet,” said Swanepoel.

UD Trucks’ passion is to make fleet owners’ working day simpler and more productive, whether they are in long haul, construction, public amenities or mining. It is about cutting fuel costs, maximising uptime, and giving fleet owners quick dependable paybacks that will ultimately increase profitability.

As one of the region’s leading truck manufacturers, UD Trucks Southern Africa is driven by its vision of being professional, passionate and dependable in everything they do. Most importantly, UD Trucks believe their local customers profit from the vast industry knowledge and expertise inherent in their dealer network.

## Apart from vehicle tracking, UD Quester’s telematics system monitors the heartbeat of the truck as it provides real-time positioning

“There are many UD Trucks team members who have been with the brand not just for years, but for decades. This fact speaks of the immense depth of expertise, experience and innate knowledge present within the dealer network,” said Swanepoel. “Over the years, these dealerships have also become an integral part of their respective communities and supported numerous projects and charities in their areas – to the benefit of the larger community.”

The company is constantly developing, strengthening and training our already comprehensive regional network of 65 dealers across southern and eastern Africa. Represented all along the major routes and trade corridors across the region, UD Trucks Southern Africa is able to provide a speedy response, knowledgeable technical advice and service, as well as ultimately dependable trucks that get the job done.”

“Buying a truck is a big investment and responsibility, and for this reason you need a transport partner that is serious about effective service delivery. At UD Trucks we understand all the complexities involved in today’s transport industry, and we therefore are able to offer fleet owners complete solutions, no matter the size of their operations,” said Swanepoel.

customers whose vehicles were recovered after being hijacked, are cementing the value and peace of mind that this feature provides.

Apart from vehicle tracking, UD Quester’s telematics system monitors the heartbeat of the truck as it provides real-time positioning, information on preventative maintenance and has assisted Fleet Managers in breakdown or theft situations.

A further benefit is Quester’s built-in fuel coaching system, which constantly monitors the performance of the driver in real time. This system keeps the driver informed of the truck’s



# Predicting the travel of 2030

**Rush-hour traffic is unbearable for many commuters today – and the problem is growing. By 2030, 60% of the world’s population will live in cities, which is 10% more than today. To address this rising concern, the Airbus Group is harnessing its experience to make the dream of all commuters and travellers come true one day: to fly over traffic jams at the push of a button.**

**Techies in Silicon Valley invent high-tech products every day. However, they still do not have a solution for one of their biggest problems: rush hour. In the San Francisco Bay Area, traffic jams are omnipresent. Commuting from Silicon Valley to San Francisco every morning takes an hour and a half, and in the evening it takes just as long to get home. Silicon Valley may pride itself on speed, but during rush hour, everything around the IT Mecca grinds to a halt.**

Traffic problems are becoming more acute across the globe as a result of increasing urbanisation, particularly in “megacities” – urban centres with upwards of ten million inhabitants. A good illustration is the Brazilian metropolis Sao Paulo, which set a new record in 2014: on the roads around the city, the rush-hour traffic stretched out for 344 kilometres. According to a study, these huge back-ups in Sao Paulo cost the Brazilian economy at least 31 billion USD a year and another study found that Londoners lose the equivalent of 35 working days per year idling in traffic. The situation is even worse in cities such as Mumbai, Manila, or Tokyo.

In response, Airbus Group experts are looking skywards to develop radical concepts that will relieve urban congestion. Participating in these efforts is A3, the company’s innovation outpost located in the gridlocked valley. A3 project executive Rodin Lyasoff and his team are actively pursuing a project coined Vahana, an autonomous flying vehicle platform for individual passenger and cargo transport.

Flight tests of the first vehicle prototype are slated for the end of 2017. As ambitious as that sounds, Lyasoff insists that it is feasible. “Many of the technologies needed, such as batteries, motors and avionics are most of the way there,” explains the



*Matthieu Repellin works in Silicon Valley for Airbus Group's corporate development department*

engineer. However, Vahana will likely also need reliable sense-and-avoid technology. While this is just starting to be introduced in cars, no mature airborne solutions currently exist. "That's one of the bigger challenges we aim to resolve as early as possible," says Lyasoff.

Transport service providers are one target group for such vehicles. The system could operate similarly to car-sharing applications, with the use of smartphones to book a vehicle. "We believe that global demand for this category of aircraft can support fleets of millions of vehicles worldwide," estimates Lyasoff.

At these quantities, development, certification, and manufacturing costs go down. And in terms of market entry, Lyasoff is equally confident: "In as little as ten years, we could have products on the market that revolutionise urban travel for millions of people." A3 is powering ahead with Vahana and as is typical for Silicon Valley, the company thinks in terms of weeks, not years. Officially underway since February 2016, the project's team of internal and external developers and partners have agreed on a vehicle design and is beginning to build and test vehicle subsystems.

### **Test under real conditions**

The challenge of flying autonomous vehicles over urban areas is summed up neatly by Bruno Trabel from Airbus Helicopters: "No country in the world today allows drones without remote pilots to fly over cities – with or without passengers." The engineer leads the Skyways project, which aims to help evolve current regulatory constraints. In February, Airbus Helicopters and the Civil Aviation Authority of Singapore (CAAS) signed a memorandum of understanding allowing Airbus Helicopters to test a drone parcel delivery service on the campus of the National University of Singapore (NUS) in mid-2017.

It sounds as if Airbus were planning to become the new Amazon.

"Not at all," says Trabel. "We've no intention of competing with the Amazons and DHLs of this world. On the contrary, we see these companies as potential customers." For the pilot project, Airbus Helicopters is developing an autonomous drone and the overall infrastructure, which is based on an operation management system created by Airbus Defence and Space. The goal of the project is to assess the efficiency and economic effectiveness of such a transport system and provide tangible proof to authorities and the general public that commercial drones can indeed operate safely over urban areas.

"If we really want to resolve this fundamental question, we have to demonstrate the system under real conditions. This view is shared by CAAS," says Trabel, explaining why Singapore was chosen as the location. In the Asian city-state, Airbus Helicopters will be able to develop the project in collaboration with the aviation authority. The success of the pilot phase could lead to the beginnings of commercial projects starting in Singapore. If the team is able to demonstrate the safe operation of Skyways over NUS, this could help shape the regulatory framework for unmanned aircraft system operations in Singapore and potentially increase acceptance for passenger flight testing, thus giving a boost to urban air vehicle projects.

### **Conclusion: feasible**

For the last two years, Airbus Helicopters has been working on a breakthrough design that could soon become reality without having to wait for too many regulatory changes. So far, it has been kept under wraps. Developers in France and Germany are working on an electrically operated platform concept for multiple passengers. The aerial vehicle, which goes by the working title of CityAirbus, would have multiple propellers and also resemble a small drone in its basic design. While initially it would be operated by a pilot – similarly to a helicopter – to allow for quick entry into the market, it would switch over to full autonomous operations once regulations are in place, directly benefitting from Skyways and Vahana's contribution.

The feasibility study has already been completed and the conclusion is favourable. For the moment, those in charge do not wish to reveal any further technical details. However, one thing that Marius Bebesel, head of helicopter demonstrators at Airbus Helicopters, can talk about is how CityAirbus would work in practice. Customers use an app to book a seat on a CityAirbus, proceed to the nearest helipad, and climb aboard to be whisked away to their destination. Unlike Vahana, several passengers share the aircraft.

The sharing economy principle would make journeys in the CityAirbus affordable. A flight would cost nearly the equivalent of a normal taxi ride for each passenger, but would be faster, more environmentally sustainable and exciting. "A taxi ride through a new city is a nice experience as it is, but flying over that city would be much more thrilling," says Bebesel. However, many

questions are yet to be clarified: How quiet would such an aerial vehicle be? How safe? How would the vehicles communicate with each other? How can operators ensure that they will not be hacked? “To answer these questions, we are relying on the expertise and support of the entire Airbus Group,” says Bebesel.

### **Man on board**

Speed is paramount in the race to get fully autonomous vehicles in the skies for passenger transport. Several companies are busy refining their flight taxi prototypes (see interview on the next page). In March, the fully electric Volocopter made by the German manufacturer e-voilo lifted off with a person on board for the first time. And a few months ago, SpaceX head Elon Musk restated his interest in electrically powered vertical take-off and landing jets.

“This market will develop quickly once we are able to deploy the first vehicles in megacities and demonstrate the benefits of quiet, emission-free air transport at competitive prices,” states Jörg Müller from the Airbus Group’s corporate development department. Working with experts from strategy, engineering and finance teams from across the company, Müller came to the conclusion that there is a big opportunity for the Airbus Group. “When looking at the transport needs of business travellers to and from airports or between business districts, you quickly realise that the potential demand corresponds to about 100 times the yearly production of Airbus Helicopters. And that this would only require replacing one out of a hundred ground taxis.”

### **Sights set high**

Electrically operated aerial vehicles, combined with more autonomous operation and data-driven business models, could herald the biggest change in aviation in decades. “Our Group’s strength is that we have interconnected projects that together are helping to drive the upcoming revolution,” states Müller. “The contribution of Skyways, CityAirbus and Vahana in terms of regulations and public and market acceptance will bring to life the future of smart cities’ multimodal transport networks.”

A network of flying taxis might sound like science fiction, but experts at the Airbus Group believe that the vision is already taking shape. Airbus Group CEO Tom Enders is the first to agree. “I’m no big fan of Star Wars, but it’s not crazy to imagine that one day our big cities will have flying cars making their way along roads in the sky,” says Enders. “In a not too distant future, we’ll use our smartphones to book a fully automated flying taxi that will land outside our front door – without any pilot,” he concludes.

### **A smart plan**

Given today’s technological and business constraints, most smart city concepts completely ignore flying. That’s why the Group are convinced that this represents a truly disruptive opportunity.





Experts worldwide are talking about smart cities of the future. But when it comes to mobility, the eyes of the pioneers have remained fixed on the ground. Their concepts are focused on electric cars, public transport and bicycles. Nobody seems to be looking for solutions in the sky. An opportunity for the Airbus Group?

Imagine landing at a major international airport after a long flight in an A380. Instead of suffering through a 90-minute taxi ride in the megacity's gridlocked traffic, you hop into an electrically operated aerial vehicle from zenHOP, which brings you to your destination – landing on your chosen zenHUB – in just nine minutes. Too expensive? No, zenMOVE has found three other travellers who also want to get to the city centre. As a result, the flight costs no more than a taxi ride. On top of that, no need to worry about your luggage – zenLUGGAGE takes care of that – or your security, as zenCYBER protects your flight against hacker attacks. This fictional scenario illustrates

**“Regulations are only a temporary barrier to entry. Projects such as Skyways and Vahana will help make such obstacles disappear someday.” Matthieu Repellin, Airbus Group**

what the zenAIRCITY concept created by Vassilis Agouridas, and currently co-developed by Benjamin Struss – both from Airbus Helicopters – is about. The word 'zen' in the name stands for zero emissions and noise. “Given today's technological and business constraints, most smart city concepts completely ignore flying. That's why we're convinced that this represents a truly disruptive opportunity for Airbus Group,” explains Agouridas.

Their business and mobility concept envisions a quiet, electrically operated aerial vehicle that is completely integrated into the infrastructure of a megacity. Possible platforms could include Vahana or CityAirbus. At the heart of their vision is a whole range of products and services, encompassing everything from flying taxis and luggage services to cyber security. The goal? Offering passengers a seamless travel experience. By harnessing the Airbus Group's resources and know-how, there may well be a day when you actually use zenHOP to glide peacefully over traffic jams.

#### **The race for urban air mobility is on**

Matthieu Repellin works in Silicon Valley for the Airbus Group's

corporate development department. His job is to identify, analyse and raise awareness about important future trends. An interview about flight taxis follows, and the usual suspects and obstacles that could soon disappear.

**When a Volocopter from e-volo lifted off with a person on board a few months ago, it was a first for so-called multicopters. In June, the Chinese company Ehang obtained authorisation to test their autonomous air vehicle designed to carry passengers in Nevada. Is it fair to say the topic of autonomous flying is picking up speed?**

Yes, there's a lot going on at the moment. Companies such as e-volo, Joby Aviation, Zee.Aero, Aurora Flight Sciences and even NASA are working on prototypes. What's striking is that many of these players are newcomers. Meanwhile, we're hearing very little from the usual suspects. But that doesn't necessarily mean that there's nothing going on there: they may be operating in stealth mode.

**Why have so many companies – including newcomers – decided that now is the time to work on flying taxi concepts?**

Several key enabling technologies are maturing. The energy density of batteries is increasing. Sensors are becoming lighter. Processing capabilities are improving. And software, to make such vehicles, is progressing rapidly. The industry expects such technologies to hit a price/performance point which would make autonomous passenger transport technically possible and economically viable. This is a highly attractive opportunity.

**In such a competitive context, how can an aerospace giant such as the Airbus Group make sure that it will not be overtaken by smaller, more agile companies?**

We have the abilities, know-how and resources to play in this space: that's a fact. But there is still a gap between the Airbus Group and Silicon Valley, particularly when it comes to accepting risks and the speed at which decisions are made and implemented. This is a major reason why we created our A3 outpost in Silicon Valley.

**But aren't passenger drones just a lot of hype? It's often said that autonomous air taxis are not feasible for regulatory reasons?**

The traditional car industry said exactly the same thing about self-driving cars. And what do we see now on the road? Google cars. Regulations are only a temporary barrier to entry. Projects such as Skyways and Vahana will help make such obstacles disappear someday.

*Beata Cece*

Feedback & Recommendations  
Will Be Forwarded To National  
Department Of Transport After  
The Conference

8<sup>th</sup> Annual

# ROAD SAFETY SUMMIT

- REACHING COLLABORATION THROUGH EDUCATING, ENFORCING, EVALUATING & ENGINEERING

Date: 2 & 3 November 2016

Venue: Indaba Hotel, Fourways. Johannesburg

## INTERNATIONAL PERSPECTIVE:

DRAWING ATTENTION TO THE CATASTROPHIC EFFECTS  
OF ROAD INCIDENTS WITH PARTICULAR  
FOCUS ON WESTERN AUSTRALIA

Kim Papalia  
Commissioner

ROAD SAFETY COMMISSION FOR WESTERN  
AUSTRALIA



DISCUSSING THE APPLICATION OF LEGISLATION,  
ENFORCEMENT, PUBLIC AWARENESS/EDUCATION, AND  
TECHNOLOGY

Dr Brian Jonah  
President

CANADA ASSOCIATION OF ROAD SAFETY  
PROFESSIONALS



## CONFIRMED SPEAKERS:

Hon. Mxolisi Kaunda  
MEC

KWAZULU NATAL DEPARTMENT OF TRANSPORT,  
COMMUNITY SAFETY & LIAISON

Khazamula Steven Ngobeni

Chief of Police: Tshwane Metro Police Department  
CITY OF TSHWANE

Kenneth Africa

Chief Director: Traffic Management

WESTERN CAPE DEPARTMENT OF TRANSPORT AND PUBLIC  
WORKS

Mojaki K Mojaki

Deputy Director: Road Safety

FREE STATE DEPARTMENT OF POLICE,  
ROADS & TRANSPORT

Johan Smith

Development Manager  
SYNTELL (PTY) LTD

Riaan Engelbrecht

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SYNTELL (PTY) LTD

Eugene Herbert

Group Managing Director

MASTERDRIVE

Thandi Moya

Director: Road Safety & Special Projects

NATIONAL DEPARTMENT OF TRANSPORT

Charles Reynolds

Chief Director

EASTERN CAPE DEPARTMENT OF TRANSPORT

President

THE INSTITUTE OF TRAFFIC AND MUNICIPAL  
POLICE OFFICERS OF SOUTHERN AFRICA

Phillip Taaibosch

President

SOUTH AFRICAN NATIONAL TAXI COUNCIL

David Frost

Deputy Director: Road Safety Management

WESTERN CAPE DEPARTMENT OF TRANSPORT  
AND PUBLIC WORKS

Zukisa Nduneni

Senior Executive: Communications

ROAD TRAFFIC INFRINGEMENT AGENCY

Tshidiso Seopasengwe

Executive: Business Development & Business Solutions

FLEET AFRICA



## KEY STRATEGIES TO BE DISCUSSED INCLUDE:

- Demystifying the Driver Demerit System
- Discussing the innovative policing technology NAMOLA, coordinating resources to incidents
- Embarking on effective road safety programmes and Campaigns
- Co-ordinating road safety and transport stakeholders towards the same goal
- Anticipating the future of effective substance abuse testing
- Road safety from a fleet management perspective
- Integrating joint information systems for road safety to fight traffic related crimes
- Filtering road safety initiatives from National through to Local level to create "one voice" towards road safety
- Taking a practical look at Self-driving vehicles : the challenges facing training institutions
- Standardising road safety initiatives to avoid a fragmented approach
- Discussing Syntell's National Accident Management System

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# HINO INTRODUCED EXTENDED VEHICLE WARRANTY AND 2-YEAR PARTS WARRANTY



**Hino South Africa, already rated very highly in the South Africa truck market in terms of all aspects of customer care – sales, service and parts – has introduced enhancements to two important after-sales offerings namely the Hino Extended Vehicle Warranty and Hino 2-Year Genuine Parts Warranty.**

“We are very pleased to be able to introduce these new initiatives as they form part of our ongoing campaign to encourage our customers to keep their Hino trucks genuine,” explained Ernie Trautmann, the Vice President of Hino SA.

What is very important is that Hino SA will issue and administrate its own vehicle extended warranty programme that will offer additional warranty cover on Dyna for 24/36 months, Hino 300 and 500 24/36 months and Hino 700 for 24 months. What this means for the customer is that their Toyota/Hino vehicles can now have warranty cover on Dyna for 4 years and Hino 300, Hino 500 and Hino 700 for up to 5 years. The extended warranty is available in South Africa and Namibia with plans to rollout in Botswana in the near future.

Now that the extended warranty will be a dedicated, in-house Hino SA product, there will be a choice of two options – a basic plan or a superior plan. Both these are very competitive in terms of costs and the new extended warranty also has the benefit of more comprehensive cover on components.

However, what is most important for the customer is that making use of the Hino extended warranty, which can run up to five years, will keep a Hino truck in its original condition as all repair work is to be carried out by a Hino dealer only. This will guarantee the use of Hino Genuine parts.

There are many benefits to this, more importantly to the Hino customer is the higher resale value they will find with Hino trucks.

“We see this as an excellent opportunity to strengthen the bond between the dealer and the customer in line with our overall Hino Total Support programme which is bearing fruit in terms of improving our Customer Satisfaction ratings,” added Trautmann.

The improved warranty on Hino genuine parts is another important factor in further improving Customer Satisfaction levels.

For over-the-counter sales, the new parts warranty policy offers

cover for 12-months or 20 000kilometres, whichever occurs first. The warranty for parts that are supplied and fitted by a Hino dealer offers cover for 2-years or 200 000kilimotres, whichever occurs first.

The warranty covers both the part and the dealer’s workmanship, giving the customer peace of mind.

However the two-year warranty is only valid if the truck has an up to date full service history for all services and repairs at a Hino dealership.

The warranty excludes lubricants, coolant, electrical components, serviced parts and wear and tear items. The use of non-genuine lubricants and coolant will also render the warranty null and void as will be the case if the genuine Hino part is fitted to a truck that has non-genuine parts.

“All in all we believe we have upped the game in further improving the deal for our customers and contributed to their peace of mind,” said Trautmann. “The customers we have discussed these new programmes with have all been most impressed.”

## **Benefits for our customers:**

### **Hino Extended Vehicle Warranty**

- Additional 3 Years on Dyna – Total of 4 Year Warranty
- Additional 3 Years on Hino 300 & 500 – Total of 5 Year Warranty
- Addition 2 Years on Hino 700 – Total of 5 Year Warranty
- Guaranteed quality parts
- Reduced Cost of Ownership
- Lower Cost Per Kilometre and Operational Costs
- No Hidden Costs
- Reduced Risk on Repair Costs

*(Terms and conditions apply)*

### **Hino 2-Year Parts Warranty**

- Guaranteed quality parts
- Reduced Cost of Ownership
- Lower Cost Per Kilometre and Operational Costs
- No Hidden Costs

*(Terms and conditions apply)*

***For more information contact a Hino Dealership near you.***



# Modern day trucking challenges the status quo

**“Technological innovations in the transport industry presents the opportunity to challenge the status quo of risk management and operational efficiencies,” says Neil Henderson, Barloworld Transport chief executive.**



**While the transport industry has seen some necessary change over the past two decades, road transport remains the dominant way to move large volumes from A to B in southern Africa. Transport is an essential service that drives the economy and impacts everyday life.**

But it is a tough industry that often struggles with poor public perceptions. It is both capital and labour-intensive, and – unless you are passionate about trucks – there is nothing glamorous about it.

That said, sections of the industry have seen radical transformation and increased innovation has made transport smarter, more efficient and, critically, safer. Modern commercial vehicles have advanced telematics, tracking systems, on-board computers, dynamic routing and scheduling, in-cab cameras and driver monitoring and management systems.

In effect, transport has entered the information age where technological advancement, mobile data and analytics is enabling a new connected world of transport. For example, the availability of data from telematics helps to monitor and analyse our fleet and our drivers in real-time, providing superior

journey management for greater efficiencies, enhanced safety and, ultimately, cost-savings for the customer.

While innovation is critical to modern transportation, people and risk management remain as important as ever in our business. Transport is all about people: those we employ, those we serve by transporting goods, and those communities in which we operate.

Drivers are a central cog in the transport industry machine and even though modern trucks are technologically advanced, they still require professional drivers with the necessary skills and experience to operate them. As professional transport operators, we have to ensure that our drivers are properly trained, competent and medically fit. Looking after our drivers and protecting the lives of all road users is not negotiable.

Customer collaboration and supply chain integration is another positive aspect of the industry today. With the amount of real-time information now available, there is also greater data sharing and collaboration with customers, making supply chains more transparent and efficient.

### **Change and risk**

As an industry, we have opened ourselves to needed innovation – to improve operational efficiencies and better serve our customers. But, aside from vehicle innovation and technology changes, we are also confronted daily by change-inducing risk.

The South African road statistics are shocking. In 2015 there were close to one million accidents, meaning one in 10 vehicles on South African roads was in an accident. Un-roadworthy vehicles and illegal operators are commonplace, and unlicensed drivers and fraudulently obtained licences are a real problem. In addition, about 43% of professional drivers in South Africa have expired professional driving permits.

This scenario is compounded by a serious driver skills shortage, and a complex labour context. Labour unrest is expected in a labour-intensive climate, and can emerge either from within the industry or in an associated industry where a large-scale strike at a client can have a knock-on effect for the transporter.

Lost productivity hurts drivers, transporters, customers and ultimately the economy. But this is a reality that needs to be considered and managed every day. Anticipating risks and having appropriate contingency plans in place is essential. Through a combination of foresight and planning, we are able to mitigate a number of known risks, maintain productivity and ensure a safe work environment.

### **Foresight and trends**

*Smart trucking nowadays is predicated on three key trends:*

- increased focus on risk management
- integrated transport solutions rather than “basic transport services”
- innovation and payload optimisation.

The focus on risk management was initially driven by customer-side demands, particularly from multi-national mining and oil and forestry companies that insist on best practice in risk management from service providers.

Self-regulation is as important to risk management. Many transport companies adopt good risk management practices, of their own accord, because they realise the benefits and long term value derived from proactively managing risk. In addition, the investment in technology and transport innovation would be wasted if not used as a pre-emptive means for risk management.

**“While innovation is critical to modern transportation, people and risk management remain as important as ever in our business”**

Due to the fact that everything in business comes back to people, best practice is more than just ticking compliance boxes – it’s about equipping and preserving the lives of drivers and other road users. The more risk-averse you are, and the better innovation in use, the more efficient and safe your operations will be. However, to both survive and grow in the transport industry, solutions are needed, not just “one size fits all” transport services.

As such, integrated transport solutions are key to addressing a customer’s full transport requirements. Transport works best when customer’s needs are understood, expectations and challenges are taken into account, and solutions are specifically tailored for each customer’s needs.

While these are all important aspects of the transport industry, an uncomfortable reality still remains: loss of life and goods, damage to vehicles, non-compliance, illegal operators and un-roadworthy vehicles.

It is essential that industry and government collaborate to keep un-roadworthy vehicles off the roads and ensure the drivers of commercial vehicles are well trained, have the necessary experience and are medically fit to meet the unique challenges professional truck drivers face.

So while accepting the status quo may mean resisting change, which hampers innovation, it entirely depends on what you define as the status quo. We believe a combination of embracing innovation and being driver-centric in the transport industry is a status quo that should always remain – it is a pivotal means of ensuring safety on roads.

*Meropa*



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This also means we're extremely passionate about fuel economy because we understand it impacts your business (it's estimated that

some long haul firms' total expenditure on fuel accounts for 40% of the total running cost per vehicle). Driving fuel efficiency in all our vehicles is at the heart of what we do and this is evident from the various options available at specification of your truck, as well as our commitment to new technologies and smart services all with the aim of decreasing fuel consumption.

We can also not underestimate the positive impact that decreased fuel consumption has on our planet, as this benefits everyone. We are constantly creating new ways to reduce the negative effects fuel consumption has on the environment, like our Efficient Driving course. With the insight that even the most experienced drivers can improve their fuel efficiency, our Efficient Driving course has been designed to provide drivers with a better understanding of the truck and shows them how to use the truck's tools to its full potential – which can result in cutting fuel costs by up to 10%.



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