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# FUTUROAD EXPO

The commercial vehicle industry has never had it this good before!



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VW and Navistar
FINALLY TIE THE KNOT

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Electric was the name of the game at this year's IAA ... but is it a case of too little, too late?



CHARLEEN CLARKE

'm asking this question, because the biggest logistics and delivery services company in the world was not able to source electric vehicles from any of the manufacturers - and so they've actually starting producing their

Incredibly, Deutsche Post DHL is producing its own electric delivery vans - in direct opposition to long-established vehicle producers. This wasn't what the company had in mind, as Dunja Kuhlmann, spokesperson for the Deutsche Post DHL Group, reveals. "Actually, the approach was taken because conventional vehicle producers turned down requests to build the electric vans in what are limited numbers by their standards," she told FOCUS.

I contacted her because I was astounded at the company's foray into the field of electric vehicles; it is - after all - a logistics and delivery services company! It is not a vehicle producer! The company's decision to produce vehicles (which I can fully understand; it's not

like it had a choice) is tantamount to Daimler going into the postal business!

As Kuhlmann reveals. Deutsche Post DHL - which runs a fleet of about 92 000 vehicles and has nearly half a million employees worldwide - was sent packing (excuse the pun) ... and so it had to make a plan. And it most certainly has.

Deutsche Post DHL's e-mobility journey started back in 2014, when it acquired StreetScooter, a former start-up that was committed to developing affordable electric vehicles. The first prototype of the StreetScooter was unveiled in 2012, and - in 2013 - it produced about 200 StreetScooters at its plant in the German town of Aachen.

In 2014, Deutsche Post DHL started using 20 of these vehicles in Bonn (which is also where its head office is located). It announced at the time that it would work towards converting its entire mail and parcel operations in Bonn to electric mobility.

Since then the StreetScooter project has truly





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**ABOVE AND RIGHT:** Deutsche Post DHL acquired StreetScooter in 2014, and the company is replacing 30 000 of its conventional delivery vans with these electric vehicles.

gained momentum. More and more of these vehicles have been produced. A second model has been introduced - the StreetScooter Work L, which boasts eight cubic meters of loading space (double the loading capacity of the original StreetScooter Work derivative).

Deutsche Post DHL has now announced that this van, which boasts a range of up to 120 km, will be available for sale to third parties on the open market in 2017.

Some 2 000 StreetScooters will be produced this year, but mass production of the vehicle is about to commence, and up to 10 000 vehicles will be produced next year. Sources say that an annual production of 30 000 vehicles is even on the cards (this has not been confirmed by the company).

Some may say that these are not huge numbers. Maybe not, but what's startling is how the StreetScooter has grown in importance and stature; initially Deutsche Post DHL was only producing the vehicles for its own use, and now the strangely named StreetScooter (because it's not actually a scooter) has become a whole new profit opportunity.



#### The company's decision to produce vehicles is tantamount to Daimler going into the postal business!

Deutsche Post DHL CEO Frank Appel is clearly a big fan of e-mobility. He's planning to replace 30 000 delivery vans with StreetScooter e-vans, and he's even mooting the idea of electrifying the company's entire fleet. "This isn't a crazy vision. It's a reality that, in the medium term, we can drive with e-vehicles exclusively," he said recently.

Will those e-vehicles be supplied by the established vehicle manufacturers? Or, will Deutsche Post DHL plunge into vehicle production, after first just dipping its toes? Only time will tell. One thing is certain, however: when Deutsche Post DHL approached the conventional vehicle producers and asked them to build an electric van, they should have made a plan. **F** 

# RELIABLE CONSTRUCTION PARTNERS

#### **Tippers and Mixers**



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13 4x2 6

16.240 FD 4x2 6m<sup>3</sup> 28.280 FD 6x4 10m<sup>3</sup> 35.340 FD 8x4 15m<sup>3</sup>

**Mixers** 

33.330 FC 6x4 6m<sup>3</sup> 35.340 FC 8x4 8m<sup>3</sup>

All FAW vehicles are durable and tough, built locally in Coega to international standards. FAW tippers can handle the toughest of environments with ease - dust, stones and uneven terrain, challenging entry/exit slopes. Supporting FAW's uptime promise is a host of aftersales back-up services, and maintenance and parts supply through a wide dealer network.

FAW provides purpose-fit mixer trucks that can conquer the rigors of any building site. There are few mixers to match FAW strength and long-lasting working capability. FAW mixer models are easy to drive and offer exceptional durability because of a strong chassis frame, the robust materials and quality standards applied in the manufacture of the truck, the drivetrain and the mixer body.



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GAVIN MYERS

utting aside all reservations about South Africa's monopolistic telecommunications provider (and there are many), you have to admit that Telkom does flight some pretty clever and humorous TV commercials. One of my favourites of late is its series of ads: Business Connexion "Meet the future. Today."

In case you've never seen them, the ads introduce "your future customers" by starkly contrasting the way kids in their late teens used to do things (maybe only as recently as half a decade ago) with the way kids just entering their teens do things today.

In addition to the fact that this particular series of ads makes me feel old - and I've only got 30 on the horizon - they do raise some important realities.

I alluded to it in Wheel Nut just last month - and as Charleen Clarke notes with great enthusiasm in her report of the 2016 IAA (on page 12) - the transport industry's future customers are going to be prefixed

E-mobility really is The Big Thing at the moment. ZF, a name that needs no introduction to anyone with diesel in their veins (soon to be e-sel?), took the opportunity afforded by the IAA's Urban Logistics of the Future conference to present its ZF Study on the Future 2016: "The Last Mile".

In conjunction with the Fraunhofer Institute for Material Flow and Logistics (IML) in Dortmund and the ETM publishing house in Stuttgart, ZF casts a light on current developments and presents forecasts for the next ten years.

A bit of context: In 2015, more than 2,9-billion parcels were sent in Germany (ZF being a German company). This is one billion more than in 2005 – and the next decade will see more of the same.

The reason is that more customers are purchasing

goods online - and they expect their goods to be delivered to their doorsteps in a matter of hours. (Telkom ad, anyone?)

In short, there are seven trends that are relevant to the future of the "last mile"

The researchers - led by Uwe Clausen, head of the IML - focused on 3D printing/local value creation, autonomous driving, e-mobility, digitisation, the Internet of Things, transport drones and delivery robots.

"We cannot, of course, predict precisely what the delivery process will look like in ten years - but these technologies are providing important impetus," Clausen explains. "However, not all of them are equally important. We can expect that e-mobility, for instance, will play a more important role than 3D printing or transport drones."

(Read more about the exciting prospects around transport drones on page 32!)

Autonomous driving was identified as a decisive trend. "The development of autonomous driving is at a fascinating stage," says Clausen. "The basic technologies are already available. However, the question is whether the infrastructure and the logistics economy are prepared."

According to Clausen, there are, for instance, pending safety issues: "How can we ensure that an automated vehicle detects a construction site, which is not properly signposted, or that it is not confused by incorrect lane markings? This is a key factor for autonomous delivery trucks to achieve social acceptance and offer economic advantages."

That may be true ... for now. However, if "your future customers" have anything to say about it in the next decade or so, you can be sure even today's boffins will look on in wonder.

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# A WORLD DEBUT

#### right here in SA!

The brand new Futuroad Expo will make its global debut in South Africa in September next year. CHARLEEN CLARKE finds out what it's all about

outh Africa has been without a commercial vehicle show for some years now ... but, thanks to the advent of Futuroad, that situation is about to change!

Next year (September 27 to 30, at the Johannesburg Expo Centre, Nasrec, to be precise) will see the global launch of a new brand within the Messe Frankfurt stable. It's called Futuroad and the brand will also be rolled out to other countries over time.

Futuroad will run alongside two other Messe Frankfurt exhibitions: the extremely well-known Automechanika and another new brand, Scalex. Futuroad Expo is Africa's international commercial vehicle show. Scalex Johannesburg is South Africa's leading trade fair for transport systems, infrastructure and logistics solutions.



Show director Philip Otto (left) and Konstantin von Vieregge, CEO, SA Shows Messe Frankfurt, are bullish about prospects for the Futuroad Expo.

Automechanika doesn't really need any introduction; however, it is the world-renowned trade fair for the automotive aftermarket. We've already hosted five Automechanika shows in South Africa; it is one of 15 such fairs in the world.

All the shows will be organised by SA Shows Messe Frankfurt, a wholly owned subsidiary of Messe Frankfurt Exhibitions of Germany. The local subsidiary, based in Woodmead, Johannesburg, is headed up by CEO Konstantin von Vieregge.

He has enjoyed a long and illustrious career in the motor industry (most recently Von Vieregge was general manager for product planning and product marketing at Nissan South Africa), and he's convinced that the timing for the new shows is spot-on right.

"I'm a very strong believer that the economy moves in cycles; it's happened for centuries; what goes down must eventually come up. The most important thing is that when the economy is shrinking, companies should not retract completely. Otherwise, when the growth does come, you will be the last to pick up. We believe we have passed the bottom of the cycle – so the time to invest is now!" he tells **FOCUS**.

Show director Philip Otto concurs. "We believe that the economy will improve significantly by the second half of next year. This is reflected in the stand bookings that we already hold for the show," he reveals.

Futuroad will take place in Hall 6 (the largest hall within the showgrounds) and the organisers believe that virtually all the major vehicle manufacturers will be there (there are just a few more major players still to sign up).

Scalex will take place in Hall 6, too, overflowing to Hall 7. Otto reports: "The stand bookings are looking really good, even though we are close to a year away from the show happening!"

While Hall 6 is devoted to trucking companies, there are a number of these companies in the Automechanika halls, too ... so the entire event will have a distinctly trucking feel to it.

Otto believes that the three-exhibition affair will be exceptionally successful. "There are definitely synergies between the three shows. Scalex, for instance, is an obvious match to Futuroad, because the end users of the trucks will be there. We introduced this event on request from the vehicle manufacturers, and following an extensive research programme in which we visited all the major fleet operators to propose Scalex – and got overwhelming support for the concept," he reports.

Von Vieregge agrees. "We have done our homework and, very importantly, we have the support of the entire Messe Frankfurt. This is very significant! Organising a trade fair isn't rocket science; it's a relatively simple affair. To build a show that is sustainable, though, requires much more.

"Messe Frankfurt brings two things to the table: we know the value of the brand and we have a global footprint. We do proper brand management, so it's sustainable going forward – and we bring the right visitors to the shows," he points out.

As such, a road show is planned into Africa to entice visitors from the continent to visit the three shows. "We have the resources to bring visitors from Africa; as such, we expect a significant jump in visitors from outside South Africa," concludes Von Vieregge.

The message is clear: Futuroad, Scalex and Automechanika won't only rock South Africa; they are going to rock our continent (especially sub-Saharan Africa) too!



Two long-standing Truck Test partners - trailer manufacturer, Afrit, and fleetmanagement services provider, Ctrack - are once again throwing their weight behind the event

ugene van Niekerk, national business development manager, Ctrack Fleet Management SA, describes the way Truck Test has evolved, to a tee: "The Truck Test is a well-known event for the trucking industry and provides a platform for objective, real-world information," he says.

Beyond this there are, of course, certain benefits that the likes of Ctrack and Afrit enjoy ... as do the participants - brand exposure and being able to show that your products can "walk the talk" are major drawcards.

"Ctrack is proud to be part of Truck Test, because it provides us with a platform to showcase our technology and provide valuable information and real-time visibility to all participants on the progress of the event," Van Niekerk explains.

Tjaart van der Walt, branch manager at Afrit, agrees: "It's a great opportunity to show why we believe Afrit is one of the leading manufacturers of quality, lightweight commercial trailers that deliver the best payload, no matter what the application," he says.

Ctrack will again install its proven Solo technology platform in all the participating vehicles - which will allow accurate recording of all measured parameters. The company will also provide mobile visibility to all the participants, via their mobile phones or tablets, for easy access to vehicle information.

For Afrit, the event allows it the opportunity to put its newly launched T6 Tautliner to the test.

"This trailer has some of the most-advanced, innovative features and world-class equipment," says Van der Walt. "The new T6 Tautliner interlink offers customers an advanced vehicle that will improve productivity and minimise downtime."

Some of its key features include:

- · A newly designed leader chassis;
- Upgraded top structure;
- · Advanced powder-coated, clamp-on equipment;
- · Improved air and electric systems;
- Tube light box on the leader and follower trailer;
- · Deck options of Domex steel, Wisa wire plywood and aluminium

The second option that will be available to the original equipment manufacturers will be Afrit's new F6 Flatdeck.

"The F6 Flatdeck has the same chassis and key features of the T6 Tautliner: which makes it lightweight and sustainable. This will ensure the customer's business stays at the top of its game," van der Walt

The reason Afrit has chosen to supply these particular vehicles extends beyond just showing off its latest and greatest, though. Simply put, both trailers can be loaded and offloaded quickly and easily with a forklift or crane, and carry the maximum payload within legal parameters.























A new name to the Truck Test game, Sephaku Cement has partnered as a load supplier for 2017. ASTRID DE LA REY finds out more about this impressive company

ephaku Cement is tackling the local cement industry with a passion and determination that's become all too rare in this tough economic climate. In just under three years (it officially started selling in February 2014) the company has already overtaken some serious competitors to become one of the top five producers of cement in South Africa.

Sephaku Cement is a subsidiary of Dangote Cement - the biggest and most influential producer of cement on the African continent. This solid support from the Dangote group makes Sephaku one of the strongest players in the local industry.

This doesn't mean it is all plain sailing. Pieter Fourie, CEO at Sephaku Cement, says: "One of the biggest challenges in this industry is transport and logistics. Our production costs are roughly equal to our logistics costs. This means our transport and logistics need to be extremely well planned and negotiated down to the last detail."

Sephaku decided to get involved with the 2017 Truck Test because the freight and logistics sector clearly forms such a large and crucial part of its business.

"We don't own any of our own vehicles, so we rely heavily on our transport partners, as do many of our peers in the industry. Consider that the local cement industry transports around 14-million tonnes of cement annually - that's roughly 1,2-million tonnes per month. A small portion is transported by rail, but the bulk of it is moved via road freight. We are, therefore, placing a lot of responsibility on our logistics partners," says Fourie.

It's clear that Sephaku understands the value of focusing on its core business, while allowing the logistics experts to handle the transport, because

transporting cement in a cost-effective manner can be a crazy juggling act.

Cement production involves many different aspects. The inbound materials (or the ingredients for the perfect cement mix, such as limestone and coal) have to be brought in from various sources to Sephaku's main milling plant in Delmas.

The company also owns Sephaku Ash, located at Eskom's Kendal Power station, which produces 1,3-million tonnes of ash annually. Most of this needs to be transported to the main mill facility in Delmas.

One of the success stories for Sephaku is the optimal usage of its clinker capacity. At its Aganang plant, situated in the Northwest Province, the company can produce up to 1,9-million tonnes of clinker each vear.

While the Aganang plant, itself, produces around 1,2-million tonnes of cement annually, at least 50 percent of the clinker produced here needs to be moved to Sephaku's milling plant in Delmas.

Logistics are crucial to Sephaku's success. On any given day, the company has around 500 vehicles on the road transporting raw materials or delivering the finished product.

Fourie notes: "Cement is not a valuable product to transport. If, for example, you're transporting gold, the value of your product justifies long distances and greater transport costs; with cement that isn't the case, which is where logistics becomes tricky."

Like many other companies in the cement industry, Sephaku (or rather its logistics partners) have mastered the art of "piggybacking". The fact that it is a nonperishable product provides some leeway when it comes to transporting cement.













Sephaku thus plans most of its movements around secondary legs. For example, during citrus season it's a race to get these perishables to their destinations (the primary leg). Often the truck will be empty on the return leg, which is where Sephaku's logistics partners jump in to negotiate more cost-effective transport rates. The operator benefits as it's no longer a wasted leg and Sephaku benefits by paying reduced rates.

This is a very efficient solution for Sephaku, but it does make planning difficult. Fourie says: "We are more than happy to let our logistics partners handle the details, as this is their speciality. They have much more insight into the road freight industry than we do, and can plan the movements to effectively suit our needs."

It's clear that Sephaku Cement has a keen understanding of what it takes to succeed in this industry. Its sales figures have proved this over the past few years, and its logical business approach shines through in all areas - especially in its understanding of, and respect for, the road freight industry that, literally, keeps Sephaku on the move.



E-mobility was the overriding theme at this year's IAA in Hannover, in Germany; virtually all the major manufacturers wowed the crowds with vehicles boasting electric powertrains. CHARLEEN CLARKE shares some of these – and other – highlights from the world's largest commercial vehicle show

lectric vehicles are hardly new; they've been around since the second half of the 19th century, but vehicle producers are jumping back onto this bandwagon now – and a plethora of new electric commercial vehicles was on display at this year's IAA.

#### **VOLKSWAGEN LAUNCHES E-CRAFTER**

The IAA was the setting for the global debut of the new Crafter, which includes an electric version known as the e-Crafter.

"The e-Crafter has been especially designed for emissions-free service in city centres. In future, we will be making the last mile easier for courier services and transport companies," explained Eckhard Scholz, chairman of the board of management.

He pointed out that Volkswagen Commercial Vehicles was giving its customers a convincing alternative to the combustion-engine Crafter, which would enable them to continue practising their transport business and trade even when only e-vehicles were allowed into city centres. "We will see the first e-Crafters reaching customers before the end of 2017," Scholz revealed.

Also at the fair, the new Crafter was named International Van of the Year 2017.

#### **IVECO DISPLAYS ZERO-EMISSION MINIBUS**

Iveco displayed the Daily Electric, a "zero emission"

minibus, ideal for city centres and shuttle services. It offers 100 or 160 km battery life with two or three high-density, sodium-nickel-chloride batteries respectively, combined with high-power supercapacitors that improve vehicle performance and battery life.

The regenerative braking system recovers kinetic energy and converts it into electricity to charge the traction batteries. The flexible charging mode, patented by Iveco, consists of an electric plug and a single connector that can charge from a domestic socket in 24 hours; it can charge from a public or private socket in ten hours; or at a public fast-charge station in two hours.

Iveco also displayed its drop-dead gorgeous Z Truck, which features a LNG engine running on bio-methane (which is derived from refined biogas) and is designed for autonomous driving. It develops 343 kW (460 hp) and 2 000 Nm torque, and features a 16-gear automated transmission with Powershift in the upper gears.

The Z Truck has a concept tank developed with SAG. It is made of aluminium insulated with a new system called Multi-Layer Insulation; a reflective foil that protects it from heat radiation. It features a technology that allows for a squared shape, which makes it possible to optimise the use of space and accommodate two tanks with a single recharge. The two tanks have a total capacity of 1 200 litres, resulting in a range of 2 200 km - 60 percent more



than the current Stralis NP, and even more than a diesel vehicle.

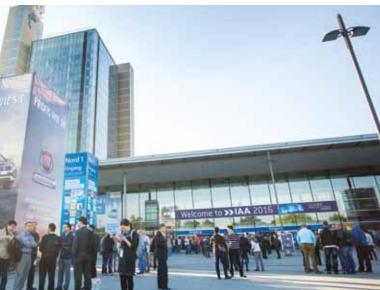
The cab is just fascinating; the driver can reconfigure the cab layout - depending on what he/she is doing at the time. For instance, when the vehicle is parked, the driver can slide back the wall at the rear, adding 500 mm interior length and increasing the living space. This makes it possible to use all the

namely that they must have a high load volume and a low unladen weight, be emission-free (in terms of CO<sub>2</sub>, NOx and noise) when on the move, and, at the same time, have good manoeuvrability.

The concept vehicle is powered by a 250 kW electric motor, which delivers its 2 700 Nm of torque to the rear axle via a propshaft.

The energy for the truck is provided by three





features and amenities the driver may need, such as a foldable bed, shower, kitchen, fridge, sink and entertainment wall.

#### **ELECTRIC SEMITRAILER TRACTOR FROM MAN**

MAN Truck & Bus presented an electrically powered semitrailer tractor for applications in night-shift deliveries to city centre locations, such as those normally utilised today by food supermarkets. Technically, it is based on a TGS 4x2 BLS-TS semitrailer tractor with a permissible total weight of 18 t.

The concept vehicle - which is optimised for operation with a city semitrailer with steerable single axle - fulfils the main demands being placed on future delivery vehicles for city-centre applications,

ABOVE LEFT: Volkswagen launches its e-Crafter. ABOVE RIGHT: MAN showed an all-new design for its trucks.

35,3 kWh high-performance, lithium-ion batteries, which are arranged under the driver's cab above the front axle, where most standard vehicles have the diesel engine.

Depending on use, the battery capacity of the new concept vehicle permits a daily range of between 50

MAN is also planning to unveil a pre-production bus version of a battery-electric vehicle (BEV) to the public by 2018. Series production of a 100-percent electrically powered city bus will commence before 2020. At the fair, MAN Truck & Bus also introduced the fully electric MAN Lion's City articulated bus.

On a non-electric front (for now), MAN also launched its new TGE van, which can handle permissible gross weights from three to 5,5 t. It offers a payload of up

Markus Geyer, MD of MAN South Africa, told FOCUS that we could expect to see an electric TGE in the not-to-distant future. "Distribution vehicles powered by electricity could come to South Africa in about five years' time," he predicted.

#### **MERCEDES-BENZ SHOWS URBAN ETRUCK**

Mercedes-Benz showed its Urban eTruck, which we have already written about extensively in FOCUS. However, we previously saw it in a highly disguised concept mode; the IAA was the platform to show the actual styling of this revolutionary vehicle. And it's a really good looker; it's really sleek, with no visible



Across the roof, a three-dimensional spoiler connects the cab with the body of the truck. It has a wide vent at the front, which acts as the air inlet for the cooling unit concealed behind the spoiler, as used in the food industry, for example.

Just like the roof spoiler, the aerodynamic skirting panels on the side of the cab fit almost flush with the body. The windscreen has been extended downwards. The mirror cams, that replace the conventional outside mirrors, are a distinctive feature on the truck.

The conventional air inlet has been omitted from the Urban eTruck because of the electric drive. Instead, a Black Panel grille is the branding element that connects the truck with its environment. It is transparent and back-lit by high-resolution LEDs. It's seriously funky.

Something else that's seriously funky is Mercedes-Benz Vans' electric Vision Van. The Vision Van features a fully automated cargo space, integrated drones for autonomous air deliveries and a state-of-the-art iovstick control.

Powered by a 75 kW electric drive system with a range of up to 270 km, deliveries with the Vision Van are locally emission-free. In addition, the electric drive system guarantees that it will remain possible to operate the Vision Van in inner-city zones where the introduction of a ban on vehicles with internal combustion engines is planned.

The Vision Van comes with two drones, each with a payload capacity of two kilograms, for autonomous delivery within a radius of ten kilometres.

#### **WORLD PREMIERE OF ALL-ELECTRIC FUSO ECANTER**

The Fuso Canter E-Cell, which has now been renamed the Fuso eCanter, made its world debut at the fair. Technically, the eCanter is radically different from its predecessor and benefits from the extensive findings of customer trials with the second generation, as well as the reduced costs of battery and component technology.

The new eCanter uses a permanent synchronous electric motor with an impressive output of 185 kW and torque of 380 Nm. Power is transferred to the rear axle by a standard single-speed transmission.

The vehicle that premiered at the IAA has a battery capacity of 70 kWh. Depending on the body, load and usage, a range of more than 100 km without stationary recharging is possible.

The results of a year-long fleet test with the second-generation electric Canter have shown that around €1 000 (approximately R15 000) per 10 000 km can be saved with this vehicle, compared to a diesel version. Coupled with a reduction in maintenance costs of around 30 percent, this makes the Fuso an economical solution for customers.

The Fuso eCanter will be delivered to customers in Europe, the United States and Japan as of 2017.

#### **ALL-ELECTRIC COACH FROM CHINA**

Chinese manufacturer BYD marked its first appearance at the IAA Show with the debut of an allelectric coach. The coach can carry up to 51 seated passengers and their luggage (four cubic metres of















TOP: Iveco's marvellous concept truck.

ABOVE LEFT: Mercedes-Benz launched its Urban eTruck.

ABOVE RIGHT: Wabco's futuristic stand. The company launched a new

electronic braking system.

**TOP LEFT:** The interior of Iveco's Z Truck.

BELOW LEFT: According to ZF, the truck of the future will be able to see,

think and act. This will help to prevent accidents.



According to Isbrand Ho, managing director of BYD Europe, the company has 200 000 employees worldwide, a 2015 turnover of over €11 billion (R 166 billion) and Warren Buffett as a major shareholder. "We plan to enter the light and heavy truck markets and will bring hybrid and electric cars to Europe, too," he said.



Volvo displayed a number of green buses, including the 7900 Electric, which runs quietly and exhaust-free and is about 80 percent more energy-efficient than a corresponding diesel bus. It has already been delivered to numerous European cities.

Its lithium-ion batteries are charged by the energy generated whenever the vehicle brakes, and also via the mains electricity network at the stops at the end of the route. Each charge via the  $oldsymbol{arphi}$ 



mains takes three to six minutes, and each minute of charging allows for five to ten minutes of driving. The bus is designed for bus routes of ten to 20 km.

The two-axle, 12-m-long bus has an aluminium body, three doors, a low floor and a bright and airy interior.

#### **BPW GOES ELECTRIC ROUTE**

While many of the truck manufacturers displayed their electric wares, so, too, did component suppliers. BPW, for instance, exhibited two new electrical

concepts - branded eSolutions for economical and low-emission transport.

"Electrification is a megatrend that is now capturing the entire vehicle and logistics industry. Beyond the hype, we are focusing on developing practical innovations that offer vehicle operators and

RIGHT: A model poses with MAN's electric

FAR RIGHT: Volvo is convinced that electric buses will transform public transport. **BELOW: FOCUS** joined a Truck of the Year jury visit to the interesting GAZ stand.

hours to charge and it has a range of about 120 km. The system regenerates during braking. It features torque vectoring, so you can one drive one wheel faster than the other. The weight is a huge thing; they tell us that they can save 700 kg in the vehicle," he revealed.

Also at the IAA, BPW presented AirSave, a costeffective solution for keeping tyre pressure within the optimum range automatically with an accompanying indication of imminent tyre failures.

The system consists of a compressor, an electric





vehicle manufacturers tangible economic benefits," Michael Pfeiffer, managing partner of BPW, told FOCUS.

"Our solutions for the electric drive and electric power generation also perfectly complement our expertise in the fields of running gear technology, brakes, lightweight design, sensors and telematics. In this way, our eSolutions substantiate our claim of being the leading international mobility partner of vehicle operators, as well as the leading system partner of vehicle manufacturers," he continued.

The company has also developed a new electric axle. Andre Cilliers, MD of BPW South Africa, told FOCUS that the electric drive axle could be fitted to small delivery vehicles - typically seven to 16-t vehicles.

"The drive axle has got two electric motors; each one develops 75 kW. The battery needs about three

control unit, a tyre valve, a number of pressure and temperature sensors, as well as a power source. Each individual tyre is automatically adjusted to the correct pressure while travelling. System faults, such as a steady loss of pressure, are indicated by means of an LED light directly on the tyre.

"It's not a complicated system and it's half the price of conventional systems; you don't need to drill holes. It can be retrofitted to existing trailers. At the moment it is designed for super single wheels, but future models will accommodate other wheel types. So, one day, we could get it in South Africa, too," Cilliers told FOCUS.

#### **SCANIA DISPLAYS A RANGE OF SOLUTIONS**

Scania displayed its new truck range, which we featured extensively in the October issue of FOCUS. The company also exhibited a gas vehicle that uses liquefied natural gas (LNG) and has capacity for long stretches of driving, as well as Scania's unique hybrid truck that combines Euro 6 and operation on hydrotreated vegetable oil (HVO) with noise- and emission-free driving on pure electricity.

On the bus side of things, Scania featured a Scania Citywide LE, a hybrid bus with the capacity for city and suburban operations, as well as intercity driving. A gas-engined Scania Interlink LD was also on display (it's the first-ever completely gas-driven bus with a regular floor).

Scania maintenance plans were a major feature, too - they're highly innovative because every truck gets exactly the right maintenance (based on how it is actually used and not on prescribed service intervals).

#### **INNOVATIVE PARKING BRAKE FROM WABCO**

Wabco launched OnHand, an innovative electropneumatic parking brake control for trucks and buses. OnHand features unique valve engineering and advanced mechatronics, and it marks the commercial vehicle industry's first stand-alone parking brake control. Furthermore, it's yet another technological building block in the race towards autonomous driving.

Creatively engineered to be the industry's leanest and only solution of its kind that can operate independently of the vehicle's air processing unit,

OnHand braking technology provides automatic engage and release functionality.

Actuated via a dashboard switch, the control system also checks and validates the safe parking of the truck and trailer combination, including on sloping roads. In addition, OnHand can provide back-up braking in case of electrical service-brake failure in redundant systems for autonomous driving applications.

#### **LOOK MA, NO MIRRORS**

Orlaco, a company from the Netherlands, introduced an intelligent camera system, which aims to replace





#### **MAN: THE LION ROARS!**

Löw, was in an extremely upbeat mood at the fair! CHARLEEN CLARKE caught up with him

truck," he told **FOCUS** at the exhibition.

told FOCUS.



but we will be first to test in the market," he

Getting back to South Africa, Löw said that issue of **FOCUS**). "We are extremely proud



**LEFT:** The Thermo King Hybrid Drive allows a refrigerated semi-trailer attached to a tractor with a Frigoblock Enviro Drive inverter filter to run electrically.

**FAR LEFT:** One of the really big news stories at the IAA was MAN's new van. **BELOW:** The Fuso eCanter made its world

side mirrors on trucks and improve overall performance. The MirrorEye's features include night vision, overtaking detection and an automated panning function.

MirrorEye consists of two high-definition (HD) cameras placed on either side of the cabin. The driver can view the camera images in real time on a split screen HD monitor in the window stile. This provides him with an optimum view of road users alongside the truck, or at an acute angle behind the truck

– at all times, everywhere and under all circumstances.

The Night Vision function provides the driver with a better view of surrounding night traffic. In addition, MirrorEye has a panning function: the cameras automatically adjust when turning or reversing, providing drivers with a better view while performing these manoeuvres. Finally, the camera system will alert the driver as to whether the adjacent lane is occupied by another road user when he needs to change lanes.

MirrorEye does more than just improve road safety. Tests also show that the aerodynamic design of the system results in a one to two-percent reduction in fuel consumption, when compared to a truck with traditional side mirrors. It will be available for sale from 2017.

#### **GAZ GROUP MAKES ITS IAA DEBUT**

It was interesting to see GAZ Group, Russia's largest manufacturer of commercial vehicles, at the IAA for the first time – and representatives of the company indicated a desire to sell vehicles in South Africa!

The company has a huge range of vehicles – from light commercial vehicles (LCV) all the way up to buses – and it dominates the Russian market with a 50-percent share of the LCV market, 70-percent share of the medium-truck segment and an 80-percent share of the bus market.

We particularly liked the look of the GAZelle NEXT dropside, which is the most popular delivery truck in Russia. The GAZelle NEXT has a frame design, which makes the vehicle reliable and easy to operate even



debut at the fair

in challenging road and workload environments. It has a loading capacity of 1,5 t and a GVM of 3,5 t.

It was interesting to see that the company uses systems and components from the world's leading suppliers: Cummins diesel engines, ZF steering gears, Mando shock absorbers, Anvis rubber bushings, brake system elements from Bosch and Mando, CSA Castellon adjustable steering columns, Sachs clutches, Takata safety belts and Delphi climatic systems.

We also liked the look of the Ural NEXT tipper truck, a 6x6 with a 10,5 m³ load volume and a payload capacity of ten tonnes.

#### **DAF LAUNCHES FLEET MANAGEMENT SYSTEM**

DAF launched its new fleet management system, which is called DAF Connect. Like most other systems on the market, it offers the operator real-time information on the performance of his vehicles and drivers. Information on vehicle location, fuel consumption, mileage, fleet utilisation and idle time are clearly presented in an on-line dashboard, which can be tailored to customer requirements. DAF Connect will be available (in Europe) in the fourth quarter of 2016.

#### THERMO KING SHOWS THE FUTURE OF TRANSPORT

"Our blinkers have come off! It's not just about cooling anymore!" So said Karin De Bondt, vice president and general manager for truck, trailer and bus at Thermo King in Europe, Middle East and Africa, at this year's IAA





# HOW GOOD IT IS WON'T SURPRISE YOU.

# HOW MUCH IT SAVES YOU WILL.



Fuel accounts for nearly half the Total Cost of Ownership of a truck. Which is why we concentrate on making ours as economical as possible. With Scania, you're paying for incredible reliability and the highest levels of uptime.

So can you have a truck that's every bit as good as you expect, but ends up costing less than you thought? **YES YOU CAN**.



Speaking to **FOCUS** in an exclusive interview, De Bondt revealed that the business of transport temperature control solutions was changing rapidly all the time. "As we're working on a new product, we're already working on the next two behind it. The pace of change is increasing constantly; we have to remain extremely close to our customers," she revealed.

There is little doubt that the company is doing exactly that. And, in response to customer needs, the company showcased the future of transport refrigeration with two major innovations at the IAA.

The first was the SLXi platform of single- and multi-temperature trailer refrigeration units, which were developed with an expanded focus on the unit's

intelligence, communication capabilities, fuel consumption and temperature management.

"We collaborated with hundreds of customers and dealers to understand the actual ambient conditions, temperatures and operating models for different types of cargo in daily use," David O'Gorman, product manager at Thermo King, told **Focus**. "We listened and then spent thousands of hours on research and development to design new features and enhancements for the next level of refrigerant trailer unit platform, the SLXi."

The SLXi offers massive fuel savings (ten to 20 percent, compared with its

companies access to inner-city areas and restricted zones.

The Thermo King Hybrid Drive allows a refrigerated semi-trailer attached to a tractor with a Frigoblock Enviro Drive inverter filter to run electrically. This enables the trailer refrigeration unit to be powered as a hybrid drive, by either the electric alternator or through its own independent diesel engine.

This innovative solution combines the alternator and the diesel engine to offer a potential reduction of 5 000 litres of fuel per year in companies with demanding distribution operations.

O'Gorman said that there was a lot of interest from South African customers in the hybrid. "Just today I





**ABOVE:** The Daily Electric offers a range of up to 160 km. **LEFT:** BPW Axles' Andre Cilliers,

with AirSave, a cost-effective solution for maintaining tyre pressures.

**FAR LEFT:** Volvo CEO Claus Nielsen announced that I-Shift was celebrating its 15th birthday. The technology features in 92 percent of Volvo trucks around the world

predecessor), 24-hour connectivity with telematics as standard, remote unit management and data access, as well as enhanced temperature control.

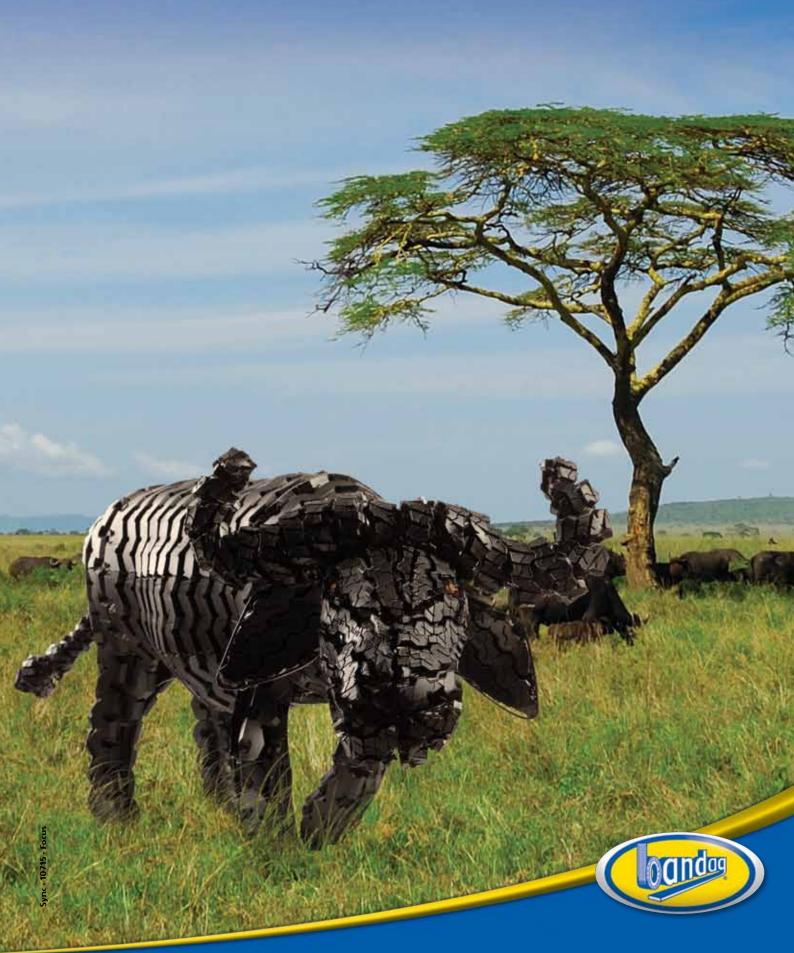
Furthermore, the new SLXi range is loaded with features that allow transport companies to substantially reduce the environmental footprint. "This new product is a quantum leap. We have made so many improvements compared to where we were previously," De Bondt told **FOCUS**.

The second new product was the Drive Trailer concept, which combines the proven expertise and technologies from both Thermo King and Frigoblock and will become part of the SLXi refrigerated trailer platform. The Hybrid Drive Trailer concept offers additional fuel and operational savings, as well as low emission and noise levels enabling transport

have had to do three demonstrations for South African customers! They see this as being the next step! It may not be tomorrow, but it's the next step. It's not a prototype or concept; it's here now! It's not just wishful thinking!" he enthused.

Both De Bondt and O'Gorman told **FOCUS** that South Africa remained an extremely important market for the company. "South Africa remains our most important market in Africa. We have a very strong dealership in your country. For us it's a focus market and this will remain the case going forward," stressed De Bondt.

Local companies that visited the stand included Spar, Woolworths, Imperial and Namib Dairies. "We're definitely seeing an increased level of interest from South African companies," O'Gorman revealed.



#### FLEET MANAGEMENT DOWN TO AN ART



With its large size, cohesive social dynamic and strategy of charging in formation, the Buffalo is feared by predators. Bandag's National Fleet Programme provides Fleet Customers with a platform to act as a strategic herd in fending off bottom line predators, like the five mileage thieves. With its tailor-made fleet management solutions, national franchise network and superior retread products, Bandag's National Fleet Programme increases vehicle uptime while reducing CPK. **That's what we do.** 

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As the second-highest variable cost factor in a long-distance trucking operation, truck owners and fleet managers cannot afford to ignore the management and control of the tyres in their fleet, says VIC OLIVER

ith the high spike in fuel costs that South Africa has witnessed over the last few years, many long-distance truck operators have applied their full focus to fuel consumption and neglected the management

Computer simulations of long-distance, heavy-vehicle operation cost studies show that the tyre costs on a truck tractor covering 180 000 km a year, coupled to a set of interlink trailers, are R185 112 a year. This equates to 10,2 percent of all the variable operating cost factors.

There are many aspects to managing the tyres in a fleet. One of the best ways is to install a system that accurately accounts for all the related costs, which can then be tabled to give the operator a true cost per kilometre (CPK) for each and every tyre in the fleet

The total CPK is not what the tyre costs to purchase, but the costs from the time of purchase to the time that it is removed and scrapped.

Accurate tyre CPK information will assist operators to effectively manage their tyres in the following ways:

 Highlight problem areas and assist them to take immediate action to rectify any problem contributing to excess tyre costs on a vehicle;

- Measure performance of each depot against others in the group;
- Measure the company's performance against industry standards;
- Highlight driver abuse;
- Highlight problems related to vehicles and trailers;
- Provide the information to assist in the selection of the correct tyre for a particular operation.

One of the basic functions of good tyre management is to ensure that the tyre pressures are always correct and that all tyres are fitted with valve caps and valve extensions on the dual wheels.

Often drivers feel that managing tyres is not their responsibility. Because it is often not part of their job description, they assume that it is someone else's job; either the person employed by the outsourced tyre management company or their own workshop personnel

Experience has shown that tyre costs will rise if their care is left to these people, and the driver is not involved as part of the team ensuring that the tyres are correctly inflated at all times.

Beware of the poor practice of bleeding tyres after they have been running and warmed up. In this instance, they will have increased pressure above



It'll soon be easier than ever before to monitor and analyse tyre performance, thanks to Continental's new ContiConnect tyre information and management system.

The system - which was previewed in September, at the IAA Commercial Vehicles Show in Hanover - analyses and reports tyre pressure and temperature for the entire fleet, based on data collected by the ContiPressureCheck sensors.

"With ContiConnect we take a huge step forward in our evolution from a premium tyre manufacturer to a solutions provider. We enrich our long-term experience in the tyre industry with data created by sensors in our truck and bus tyres," says Nikolai Setzer, member of the Executive Board at Continental and head of the tyre division.

The system can work in multiple set-ups to connect all tyres in a fleet. In combination with the modular design of ContiPressureCheck, it allows for the collection of data with a stationary receiver in the depot, or with a receiver unit in every vehicle, on a real-time basis while on the road.

Should the tyres reach a critical level, the system notifies the fleet manager and offers advice on corrective measures that can be undertaken.

An online portal provides transparent reports on the fleet's tyre performance and overall efficiency. The result is more mileage, longer durability and greater fuel savings. This means higher uptime, less maintenance,



and overall success in mobility and efficiency for the entire fleet.

"For our customers this means a change from manual and routine tyre care to automatic monitoring and targeted care. They profit from our unique combination of competences in-house: with profound know-how on tyres as well as on sensors and vehicle-related data. This makes Continental the perfect partner in an ever digitalising logistics world," Setzer adds.

ContiConnect works with both retrofitted and factory-fitted ContiPressureCheck sensors such as those included within the new Continental iTyre.

Furthermore, the ContiPressureCheck system, which gives input to ContiConnect, is compatible with a broad variety of fleet management systems on the market, including solutions that come from different original equipment and aftermarket manufacturers.

Unfortunately, ContiConnect will only be available in key markets in Asia Pacific, Europe and the Americas when it launches during 2017.

their starting pressure. This is normal as air expands when heated. Therefore, lowering the pressure of a warm tyre will result in the tyre being under inflated once it has cooled.

Other factors that need to be taken into consideration when selecting the route the vehicle will travel that will affect tyre life are:

· Road conditions - winding roads with high hedges, or other obstructions to vision, cause frequent braking, acceleration and side thrust on the tyres.

- · Steep hilly roads these tend to increase wear, due to the high tractive effort plus braking and acceleration.
- · Road surface where possible, avoid roads that are in a poor condition. Often it is better to take a longer route.
- · Proper management of the tyres in a fleet will reduce variable operation costs and increase the safety of the company's vehicles on the road.



One of this country's most respected commercial vehicle industry authorities, VIC OLIVER has been in this industry for over 50 years. Before joining the FOCUS team, he spent 15 years with Nissan Diesel (now UD Trucks), 11 years with Busaf and seven years with International. Do you have a comment or thought you would like to share based on this column? Visit www.focusontransport.co.za and have your say!



While some economists feel that the South African economy has reached the lowest point of its contraction, the remaining question is: at what point will it begin to grow again? Full-maintenance leasing is an option that could make the wait a bit more bearable

more financially savvy approach would be to treat all transport-related costs as operating expenses, through a full-maintenance lease (FML). The FML model optimises cash flow and allows businesses far more flexibility – for both up- and downscaling," we quoted John Loxton, general manager of the fleet management and leasing division at WesBank, as saying in the August issue of **Focus**.

Loxton was talking about fleet-management and leasing solutions to help transporters better manage tough trading conditions and reduce transport-related costs. A full-maintenance leasing contract bundles all the costs of owning a vehicle into one, predictable monthly payment, providing a bit of stability to the balance sheets.

FML is a concept that has, over the past year or two, increasingly gained prominence in the language of trucking. The concept obviously appeals to fleet managers and bean counters alike (some would say they are one in the same today...).

This is so much so that Standard Bank recently reported that, over the first six months of this year, there was a five-percent increase in new customers who prefer to lease their vehicles instead of buying them, compared to the same period last year.

"The result is an overall 20-percent increase in deals/units," David Molapo, head of Standard Bank

Fleet Management, reports.

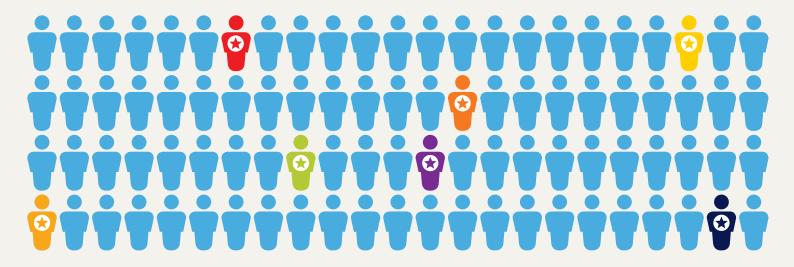
"Up to now, South Africans have been notoriously attached to the idea of owning their vehicles. It is most likely that leasing will eventually become dominant in South Africa, because it makes economic sense. The question is: how fast it will happen?" he adds.

There are many factors that could influence this, including the availability of leasing options, how well they are marketed, as well as the strength of the cultural preference for ownership.

However, Molapo is confident that the move towards leasing would happen faster among South Africa's larger corporate fleets, which are generally more plugged into international best practice, compared to smaller fleets and ordinary consumers.

"One possible driver in favour of leasing is economic trouble of the sort currently being experienced. Growth in gross domestic product (GDP) is stagnant, business confidence seems to be low, and new vehicle prices continue to increase even as sales numbers decrease," Molapo explains.

"Tough economic times are likely to focus the minds of fleet managers on the real costs of vehicle ownership and boost the acceptability of leasing as an alternative. Under such conditions, it is not surprising that fleet managers would take a serious look at alternatives to the traditional ownership model," he concludes. **F** 



## Only 7 out of 100 applicants have what it takes to become a Barloworld Transport driver.

Professional driving requires skill, knowledge and the experience to anticipate, assess and adapt to situations quickly. At Barloworld Transport we recognise that our service is only as good as our drivers. This is why all new drivers are required to complete rigorous training before they even reach the road. During this time we analyse each driver's risk profile and driving pattern, identify weaknesses and provide corrective training to ensure they meet or exceed our standards and requirements. Through advanced training and innovative technology, these men and women are attuned to their surroundings every second of the journey. They are quick thinkers who apply expertise and instinct to manage on-road risk and protect lives and loads.

**Instinct.** It's what drives us.™





In many respects, fleet managers today work at the cutting-edge of information and communication technology convergence, where myriad hardware and software elements combine to deliver real-time information on the location and status of mobile assets

very year, new advancements in fleet-management and telematics technologies are released and implemented in vehicle fleets to ensure their sustainability, safety, efficiency and profitability. However, progress can often be a double-edged sword...

In the fleet-management industry, the adoption of new technologies brings an ever-growing amount of data that needs to be effectively managed to deliver genuine business intelligence. This is a timeconsuming exercise and fleet managers often lack the capacity (time and/or skills) to convert this plethora of data into functional and actionable business

In essence, the exponential rise in fleet data, while enabling certain areas of the fleet operation, has the negative effect of swamping fleet managers with too much data. Alternatively, it cuts them off from valuable information by streaming this data to respective thirdparty storage silos (data servers) where it remains untapped.

This conundrum has in many ways been mitigated by what are known as "big data" management services, which strive to streamline and simplify increasingly complex data sets within fragmented/distributed business environments.

John Bell, general manager of FleetPro, a division of Altech Netstar, says: "The need to distil and integrate fleet data more effectively, so that it delivers enhanced management reporting, has ushered in a new era in the fleet-management arena.

"Big data is now being mined and filtered by third-party fleet-management service providers to empower fleet managers with increasingly powerful analytical and reporting tools."

The core of big-data services to fleet management is the gaining of access to and/or ownership of relevant fleet data from multiple business entities along the fleet's supply and demand chain.

"The fleet-related data residing on the servers of banks, insurance companies, fuel suppliers, vehicle suppliers, traffic authorities, vehicle workshops, parts suppliers and their customers, (to name a few), is critical raw material for the generation of superior business intelligence.

"When this big data is properly accessed and managed by a suitably designed and accredited fleet-management system like FleetPro, the chances of improving fleet cost efficiencies are significantly improved," adds Bell.

"Historically, fleet data has been stored for limited periods, due to the sheer volume of data generated by modern telematics systems. A large fleet could be sending millions of data packets per day - from various telematics units installed on the vehicles - with varying degrees of relevancy to that particular fleet's strategic objectives.

"Without smart, customised fleet-management software and related support services, much of





ABOVE: "Big data" needs to be collected, presented and managed in an easv-to-use wav.

that data could essentially be useless as a fleetmanagement enabler.

"FleetPro solves this problem by fetching data from fleet-associated data silos and integrating it in a manner that enables deeper historical reporting and 'predicative analytics', giving fleet managers more powerful 'rear-view mirrors' and 'telescopes'."

Forming part of Netstar's Vigil suite of fleetmanagement solutions, FleetPro spans the full spectrum of fleet-management reporting, including financial, maintenance, fuel and inventory management, as well as insurance, fines, driver database, vehicle and driver licensing, vehicle rental and vehicle-tracking management reporting.

"The purchase by Altech Netstar (traditionally a vehicle tracking company) of the FleetPro fleetmanagement software product is an indicator of the strategic migration towards the supply of an all-encompassing fleet-management service to the market.

"The ability of the FleetPro fleet-management system to extract relevant Netstar vehicle tracking big data is a game changer, and has already been successfully applied by Altech Netstar in a number of fleets utilising both products," adds Bell.

"For example, retrospective kilometre readings have been applied to transactions for both fuel and maintenance to ensure more accurate information. The Netstar driver-tagging data has also been accessed allowing the allocation of old traffic fines to the correct drivers. Combining this with driver behaviour data, the FleetPro system now provides a clearer picture of what is happening to mobile assets in their operational role."

"The introduction of next-generation management software and methodologies will always create a need for new skills, and Altech Netstar is constantly employing fresh talent to provide a specialist outsourced fleet-management service for its fleet customers via Vigil FleetPro," says Bell.

"The addition of big-data services to the FleetPro offering gives government, blue-chip and privately owned fleets unprecedented reporting speed and precision, allowing their fleet managers to focus on their core responsibilities.

"The big-data services in the FleetPro solution bring greater insight into the historical and current performance characteristics of both drivers and fleet vehicles. Furthermore. the consolidation and distillation of fleet data into predictive analytics enables greater proactivity in managing vehicle total cost of ownership," Bell explains.

The outsourcing of big-data management is a growing international trend and the fleet-management industry has been an

early adopter of the technologies and processes that enable it

FleetPro provides the solution by doing the hard data gathering and cleansing work and then delivering it to end-users via easy-to-use software with intuitive dashboard interfaces.

This allows for improved accuracy in the benchmarking process, while equipping management with a more comprehensive knowledge base from which to formulate strategies to future-proof the fleet against cost inefficiencies and rises in on-road risk.

"Information technology should never be intimidating, and people need to extract every ounce of value out of the data it delivers. Altech Netstar is a front-runner in this regard with a proven track record in big-data management, and FleetPro is the fleetmanagement solution that directly addresses the big-data management needs of the forward-thinking fleet manager.

"Big-data management is all about getting as comprehensive a picture as possible on the circumstances affecting the fleet's operating environment, and being able to pinpoint areas of weakness, while identifying opportunities for growth," concludes Bell. F

here's a funny thing about the trucking and transport business: thousands of vehicles run up and down the highways and byways of the country 24-hours a day, making collections and delivering to clients, who are not in the transport game and assume this is all there is to it...

To be fair, there's no reason they should think otherwise ... after all, a well-run, professional transport company will reliably deliver on time and maintain a trusted working relationship with its clients.

This is just the sort of relationship Grain Carriers has built up with its clients over the last 25 years. In celebration of that milestone, the company invited its longest-standing clients to join it for a six-day-long celebration comprising of an unforgettable road trip and a weekend full of activities in the Cape.

#### A CLOSE-KNIT GROUP

Prieska, a small, rather dusty Northern Cape Town about two hours out of Kimberly, was the start of the journey. Seven Grain Carriers trucks – a mix of Mercedes-Benz and Volvo pulling belly dumpers and a couple of side tippers, loaded with upwards of 36 t of grain – stood against a backdrop of silos at the GWK Prieska depot.

Just ahead, the drivers - Tom Terblanche, Pieter Smuts, Sakkie Faber, Johan Schoerie, Tobie Spannenberg, Johan Barnard and Janneman Botes - stood stern-faced and ready to demonstrate to their group of passengers what life on the road is all about.

It didn't take long for their demeanour to change to that of a warm embrace and light-hearted banter though; drivers and guests were all long-time business associates turned friends – in true Grain Carriers tradition.

Following a light-hearted welcome briefing from Terblanche (in fact the Grain Carriers MD), in one close-knit group, the convoy hit the road into the unique scenery of the warm, fynbos-rich Klein Karoo.

#### **HOW TO PARK SEVEN TRUCKS**

It's amazing to watch people who really know trucks with their vehicles ... the seven drivers, each of whom actually holds a position in the Grain Carriers management and operations team, all started their working lives behind the wheel.

"It proves that diesel flows through our veins," Terblanche would later beam. Following a day of "truckers food" and light-hearted banter over crackling radios, Three Sisters, about 300 km from Prieska, would be the stop for the first night.

Here, the rookie co-pilots would later spend the night in the cabs. There was a problem, though - the seven rigs had to be parked on the very narrow dirt roads just outside the guest lodge...

With sunlight fading and the temperature dropping, as it can only do in that part of the country, driver manager Isaac Ramaile and senior driver trainer Silas



Mphela – with help from GM of the Cape Town branch, Stephan Loubser, operations director Gerrie Delport and financial director Bernie von Wielligh – quided the trucks into place.

The smell of braaivleis, boerewors and brandy and coke filled the air, and it didn't take long for the guests to comment on what a unique experience this was turning out to be. Many were, in fact, still in awe of the mind-boggling parking manoeuvres they'd witnessed earlier!



**ABOVE LEFT:** Trucks and truckers: ready for action! **ABOVE RIGHT:** Helicopter flips around the Cape west coast were a real treat for all the quests.

#### **GRAIN AND DIESEL DO MIX**

When Grain Carriers was started in 1991, almost 100 percent of the country's grain was transported by rail. Today, about 70 percent is transported by road; with Grain Carriers transporting more than four million tonnes per annum – a leading market share of over 20 percent.

"We believe that natural growth is sustainable growth; which means doing the right things at the right time, in the right place," explains Terblanche from behind the wheel (his co-pilot kindly gave up his seat for me to spend a leg of the journey on the road with the humble MD).

"When Hennie de Lange and I started the company, we originally specialised in grain. Our timing was perfect as the railways couldn't keep up with demand; it was a golden opportunity to enter the market. Even today, timing is essential in everything we do," he continues

school days (he'd help out at his uncle's company – Terblanche Transport – and learnt to drive moving the trucks to and from the wash bays), and he spent the first three years of his working life on the road.

De Lange, on the other hand, was a trader with his own trading company.

"He was still the trader and I was on the transport side. As a co-owner of the business, my title was 'transport broker," the hands-on MD reminisces.

#### **ADDING TO THE RECIPE**

Today, the company runs 170 of its own vehicles and has 300 permanent subcontractors on its books. While still the centre of the business, grain is, however, not its only focus.



#### **OPERATOR PROFILE**

Since 2008, the company has experienced a period of rapid expansion, which has seen the addition of various other divisions within Grain Carriers.

"There is a lot of competition in the market. which means we need to stay competitive and our subcontractors need to be able to perform at the same level," Terblanche says.

In 2014, the company decided to enter Namibia, establishing a separate entity in Windhoek, called Grain Carriers Namibia, 30 percent of which is owned by the Frans Ndongo group. "I loved the country when



ABOVE: A trucker's lunch at the roadside provides a quick reprieve for the co-pilots.

**RIGHT:** Buffelsfontein Game and Nature Reserve was the venue for a treat of game drives and helicopter flips.

I visited on holiday and wanted to do business there. Today we run 65 vehicles in and around Namibia, of which 26 are registered in Namibia. The business strategy was to buy only five trucks a year, so we are doing very well there," he says proudly.

At the same time, the company started Themba Trans, which is a Level-1 BEE consulting and brokerage company that focuses specifically on bigger, ad-hoc contracts.

The company also runs its own workshop, called GC Truck Centre, to which it added a panel-beating division this year. As a workshop accredited with Volvo and Mercedes-Benz, the company services its own fleet under warranty, while the dedicated panel shop allows it to repair any damaged truck and have it back on the road within two weeks!

As they say in the classics, that's not all, folks. Plans for the future include the building of a new Cape Town branch including a warehousing and workshop facility in March 2017. This will add a further 4 000 m² underroof space to the existing 20 000 m² in Port Elizabeth and 8 000 m² in Johannesburg. The facilities allow the



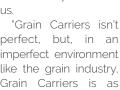
company to manage the supply chain and handling of the grain products it moves.

The grain supply chain is, in fact, due for big things; the company is working on a complete supply chain solution for the industry. "This will be a world-first..." Terblanche smiles, without giving too much away.

According to De Lange, the nice thing about the

company is the variety it offers. "This almost allows for us to create tailor-made solutions. Our clients know that if they do a transaction with us they can trust

perfect, but, in an imperfect environment like the grain industry, Grain Carriers is as close to perfect as you



could hope to get," he adds.

#### A BUSINESS ABOUT PEOPLE...

Describing, what he calls, the lighter side of Grain Carriers, Terblanche says: "Our business is about people, not the trucks. In the old days we used cheque books to make payments and within each book we made a commitment to provide whatever we could from our profits to the less fortunate - and we've stuck to that"

Today, the company provides a fixed percentage of profits through Grain Care Trust, which is managed by a permanent social worker and provides the poor, the elderly and young children and schools with necessities. The company holds two golf days a year to raise additional funds. These are mainly sponsored by suppliers.

"We're also proud of our GC4Christ initiative, within which seven well-trained evangelists are permanently employed, and spread the word of God by means of handing out bibles and CDs," Terblanche adds. "Personnel in the company have even started bible-





patience, and they instil that in our drivers; who need to be relaxed in the road," says Terblanche.

The company's road safety record speaks for itself, with the unfortunate loss of only one driver on the road in 25 years.

"One of our drivers retired just over a year and a half ago and he had worked for us since the day we started. There are also guite a few going on for 20 years now," he adds. Ramaile has, in fact, been with the company for nearly 20 years, as has the operations director Delport.

There were other milestones to celebrate on the trip as well. At a formal yet relaxed dinner on the last night, Schoerie and Von Wielligh were presented with ten-year certificates to celebrate their decade with the group.



ABOVE LEFT: Grain Carriers MD Tom Terblanche began his career behind the wheel, as did most of the company's management. ABOVE RIGHT: A whale, wine and wors tour kicked off the weekend's activities.

study groups, which has created a very positive atmosphere within the whole company."

The company also has a doctor contracted to the business with rooms at the Randfontein (Johannesburg) depot, who helps keep the drivers' health in check.

#### ...BY PEOPLE

Chatting to Terblanche, it's clear that the way in which the company selects and manages its staff has been essential to its success over the past 25 years.

"Part of the success of the business is that those who run it day-to-day all come from the road. They have a love for this business and they understand what it's like to be on the road - not just the living conditions, but also the distances, the routes travelled, and the importance of understanding what the truck is saying and doing...

"The drivers also need to understand what we want, how we need to treat each other and the customers."

Having a good relationship with trustworthy drivers has definitely proved beneficial for Grain Carriers. "With the growth in the business it's been tough to keep up. Isaac and Silas have good temperaments and

#### A TRIP TO REMEMBER

With the trucks having returned to Prieska ready for the next group of guests, and the first group preparing to head home, excitement and camaraderie was still in the air.

"This was always a dream of mine," says Terblanche. "We needed to say thank you to our biggest supporters and celebrate with them." (They were spoilt with a whale, wine and wors tour, a game drive and helicopter flips).

"But it was also important for us to get them out of their offices so they can have a feel for the road. They now look at trucks differently.

"Even if they can enable our drivers to turn the trucks around three percent quicker than normal going forward, it's an hour saved a day, which is an hour that the vehicles are not on the road. That means an hour less risk for the company, our drivers and other road users," he explains.

It's amazing, even after a quarter of a decade, how a single road trip can change even the most basic assumptions.

De Lange concludes: "There's a saying that you can only see the footprints you've made off the beaten path - and Grain Carriers has made new paths where there weren't any before."



The humble van is about to become so much more. CHARLEEN CLARKE attends the Van Innovation Campus, hosted by Mercedes-Benz, and discovers that the van is destined for great things...

magine you've just arrived from outer space and someone is chatting about vans. You have no clue what a van is; you have lots of spaceships on your planets, but no vans. Being a resourceful alien, you whip out your phone and Google "van". Chances are good that your search will tell you that a van is "an enclosed boxlike motor vehicle having rear or side doors that is used for transporting goods".

In the past, that definition certainly did apply. However, the van of the future will be anything but "boxlike". It will also do so much more than just transport goods. Here are some of the current and future personas for this amorphous vehicle:

#### 1. LANDING PAD

The van of the future will be big buddies with drones (my colleague Gavin Myers alluded to this in last month's **FOCUS**). That's because, even though vans are fairly nimble little creatures, they do face one monster problem: traffic.

A drone, of course, doesn't have that problem. (Well, not yet, anyway.) It can whizz over the busy roads to make its delivery.

There is, however, one big problem with this

scenario: where will the drone land? It could hardly land on the M1, for instance; the poor little chap would get scrunched, for sure.

Enter Mercedes-Benz Vans, which has a terribly clever so-called "future strategic initiative" known as adVANce. In terms of this initiative, it is joining forces with other companies to try to resolve practical problems such as this one.

In this case, it is cooperating with the innovative delivery drone start-up Matternet, which hails from Menlo Park, California. The two companies have come up with an innovative solution, whereby the van and drone work together, communicating constantly. Ultimately, the van serves as a landing pad.

#### 2. WAREHOUSE

Service technicians who work on site spend enormous periods of time fetching parts that were forgotten or not ordered (it can easily be an hour a week). What if their van could serve as a warehouse that is always stocked with the right parts? Thanks to Mercedes-Benz Vans, Sortimo International and Fischerwerke, this isn't just a pipe dream.

This is how it works: You take a van (in this case a Vito), which boasts an integrated Sortimo HD van racking

system, equipped with near-field communication tags (NFC tags) as well as consumables from Fischer. The technician scans the NFC tags with his smartphone and is provided with an overview of what parts must be on the rack by the Sortimo Refill App.

That night, the technician goes home for a nice snooze and his van is restocked while he is snoring. This is thanks to the Delivery App from Mercedes-Benz Vans, which allows the logistics company to locate the vehicle via GPS, unlock it, deliver the parts and then lock it again.

Oh, and just in case the guy from the logistics company is having a blonde moment, there's also the

Mercedes-Benz Vans Driver's App, which allows the technician to check the status of his vehicle at all times. He can check the location of the vehicle (this would

Two options for future package delivery are the use of drones (opposite) or robots (right). Both operate autonomously and use the van as their base.

and efficient shared trips without lengthy detours. Via operates with fixed fares and payments are cashless (they're made via the app). The average waiting time for a van is around five minutes.

In a similar vein, there's MVMANT, a mobility platform that has already been tested successfully in Ragusa, Italy. While Via's routes are flexible, the MVMANT vans drive along specified routes, picking up passengers along the way.

An algorithm calculates how many vehicles are required at a specific time and on a specific route. A Machine Learning engine constantly improves the algorithm by taking into account the service demand,



historical traffic patterns, weather forecast, date, hour and special events. Like Via, an app is used to book the ride in the van and also for payment.

#### 4. ROBOT GARAGE

E-commerce is booming, and courier companies need to deliver packages in the shortest possible time. Enter the fabulously named Starship Technologies which, together with Mercedes-Benz Vans, is transforming the van into a mobile goods depot and a distribution centre for autonomous last-mile deliveries using robots. (Incidentally, Starship Technologies was started by Ahti Heinla and Janus Friis, the two co-founders of the Skype instant messaging service.)

With this scenario, the van is home to Starship robots, which live in their very own robot garage within the vehicle. They enter and leave the vehicle via ramps. At designated delivery stops, the van's driver loads the robots and then sends them on their merry ways. The Starship robots, which can cover a range of up to three kilometres, move along the pavement at a speed of roughly six kilometres per hour. They are able to detect (and avoid) obstacles en route. Once they've completed their deliveries, they return to the robot garage.

This scenario is already possible; we witnessed a demonstration at the Van Innovation Campus. The future is even more thrilling; one day we will see a freefloating robot fleet that does its own thing - and will leave and return to the van autonomously. Importantly, the van will be essential to the smooth running of the operation; the robots will always require their garage.

Even aliens are bound to be impressed when they see what "an enclosed boxlike motor vehicle having rear or side doors that is used for transporting goods" will be capable of in the future...



be an exceptionally useful feature in South Africa) and see whether the doors are locked or not.

#### 3. BUS/TAXI

Regular buses and taxis do a good job of providing public transport solutions (overseas) but they do have their limitations, such as fixed routes (in the case of the buses) and high prices (with the taxis). Enter Via, a ridesharing provider that is already operating in New York City, Chicago, Washington DC and Orange County, California.

The company, which is similar to Uber, matches, in real time, multiple passengers headed the same way with a single van. Passengers can request rides through a mobile app, and Via's system instantly selects and, if necessary, re-routes the van that best matches the passenger's route.

Via's smart algorithm directs passengers to a nearby corner for pick up and drop off, allowing for quick



Electra Mining Africa 2016 was one of the biggest and best thus far, attracting a multitude of suppliers and buyers. We went along to find out more

he inaugural Electra Mining Africa exhibition was held 44 years ago, at the Milner Show grounds in 1972. Today the show is southern Africa's largest trade show and one of the world's largest mining exhibitions.

This year, more than 850 local and international exhibitors showcased their latest technologies, products and services across 34 000 m² of indoor/outdoor exhibition area. Just more than 29 000 visitors attended from both South Africa and the continent at large.

an appearance. "It is important to see first-hand the capacity of our industry and Electra Mining Africa gives us this opportunity. It is a great place for us to demonstrate our manufacturing capacity," Corin continues.

Creating support from government was also a key objective. Eric Bruggman, CEO of the South African Capital Equipment Export Council, says: "We need the support of the government to grow this sector. A strong local industry is necessary if we are to export our goods.

"South African technology in mining is by far the best in the world – we are world class and do not have to hide from anyone. We can compete against the best."

This was evident from the stature of exhibitors this year, 40 percent of which have re-booked for the next show. Here is what just a few had to offer...



"We put in a massive effort to bring African visitors to the show. It was also very pleasing to have the CEO of the Botswana Chamber of Mines, Charles Siwawa, and the president of the Zimbabwean Chamber of Mines, Isaac Kwesu," says Charlene Hefer, portfolio director, Specialised Exhibitions Montgomery, organisers of the exhibition.

According to Gary Corin, MD of Specialised Exhibitions Montgomery: "The show is a key platform for government to engage with the private sector, with the export of South African technology and products into Africa and globally."

The Gauteng Premier, David Makhura, even made

#### **ACS-EMBRACE**

ACS-Embrace, an African provider of enterprise resource planning (ERP)

solutions, recently released a new version of its Embrace ERP Software - Embrace 14.

At Electra Mining the company demonstrated how Embrace 14 enables companies to manage and tightly control all costs, optimise and streamline operations and embrace sustained profitability.

For example, Embrace 14 has an integrated Embrace Service, Repair and Maintenance solution suited to both external and internal workshop environments, as well as the new Embrace Tyre Management system to help improve tyre performance, reduce costs and enhance vehicle and driver safety.

Failsafe Fire Projects has specialised in fire suppression for heavy-duty vehicles and stand-alone machines over 20 years, with a focus on mining, agriculture, military, marine, public transport and many other industry sectors.

At Electra Mining 2016, the company launched its newly developed electronic fire panel, which is integrated with a remote monitoring GPS system. In addition, the company had a training rig on display.

#### **FESTO**

The most impressive offering at Festo's stand was undoubtedly its bewildering AirPenguin – a product from the company's research division, the Bionic Learning Network.

The AirPenguin is one of its products that incorporates human-machine interfaces, autonomy and flexibility. These are all qualities that are required in the mining sector. The AirPenguin is an autonomously flying object that comes close to its natural archetype in terms of agility and manoeuvrability.

#### **KAL TIRE**

While Kal Tire's reputation in the mining industry grew from supplying and servicing tyres on mine sites around the world, the company has also become known for developing solutions to drive tyre performance and safety. Along with its award-winning Ultra Repair technology, innovative tools for servicing tyres were shown that provide safety, improve efficiency and decrease service time.

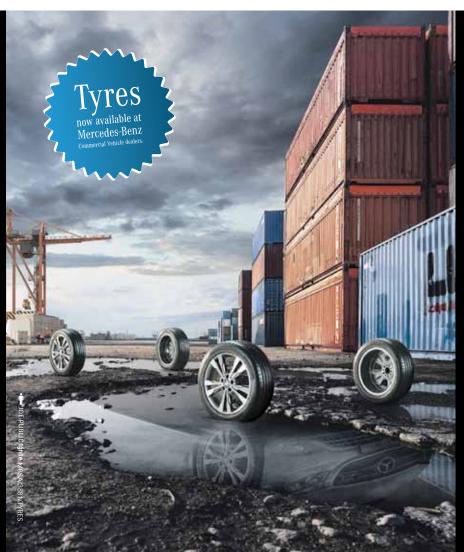
Kal Tire also displayed its tyre recycling solutions. In order to offer services to customers at every stage in the life cycle of a mining tyre, the company has embarked on providing two solutions; shredding and thermal conversion.

#### POWERSTAR

Powerstar Industries exhibited a range of vehicles including extra-heavy trucks and yellow metal under the Shantui brand. In addition to its own Powerland F3T 3042 and Powerstar V3 2646 6x4 truck tractors, there were numerous pieces of equipment from Shantui. These included the I-SF30 forklift series, the SL50W-3 wheel loader series (Shantui's best seller), the SD22W bulldozer series, SE480 excavator and the SR19 road roller series.

#### **VOITH**

Voith unveiled its latest materials-handling technology. The company has long provided the mining industry with top-line fluid couplings and highly efficient drive solutions and, in 2015, added the field-proven systems of mining-conveying manufacturer, Hese Maschinenfabrik, to its portfolio. **F** 



# Tyres, now in focus at Mercedes-Benz Commercial Vehicle dealers.

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Designed and built for heavy-duty operations, the Astra HD 9 86.56 8x6, with a gross vehicle weight of 60 t, can replace a dumper in opencast mines. Its driveline is based on a Cursor 13 engine rated at 560 hp, coupled to a 16-speed automated gearbox. GIANENRICO GRIFFIN reports

he Astra HD9 86.56 8x6, tested in a quarry in northern Italy near Piacenza, is by no means a conventional off-road truck. Shown as a world premiere at the last edition of Bauma in Münich – the German exhibition dedicated to construction vehicles, machines and equipment for the mining sector – the 60-t gross vehicle weight (GVW) HD9 86.56 is among the top models in the portfolio of the Italian truck manufacturer, a brand that belongs to the CNH Industrial Group.

It has been designed for heavy-duty missions in extreme working environments typical of the mining-extractive sector - in which it can replace a rigid dumper - and the oil industry.

The HDg 86.56 is equipped with a Euro-6 Cursor 13 engine, rated at 417 kW (560 hp) at 1 900 r/min, with a peak torque of 2 500 Nm from 1 000 r/min.

# RETARDER AND ENGINE BRAKE TO SLOW DOWN SAFELY

Like all Iveco heavy- and medium-duty engines, the Cursor 13, Euro 6 uses the Hi-SCR system for after-treatment of pollutants, which does not require the exhaust gas recirculation (EGR) circuit

Moreover, with the Hi-SCR solution there is no need for active regeneration of the diesel particulate filter (DPF), a feature that decreases the energy efficiency of the engine and lowers its fuel consumption.

The engine, which uses an electronic-controlled variable-geometry turbocharger (EVGT), is coupled to a ZF AS Tronic 16AS 2631 TO 16-speed (plus two reverse gears) automated transmission.

The transmission is controlled by off-road software and has two operational modes: fully automatic or manual (sequential). The powertrain of the 8x6 rigid is completed by a Steyr VG2700 disengageble transfer case, which allows a distribution ratio of the drive torque (front/rear) of 1:2,6.

The Cursor 13 is equipped with Iveco Super Engine Brake, capable of a maximum braking power of 463 kW at 1 900 r/min. In addition to the Super Engine Brake, the HDg 86.56 8x6 is equipped with a hydraulic intarder, integrated to AS Tronic automated transmission.

Both the intarder and the engine brake are actuated by a five-stage multifunction lever, which is also used for setting the cruising speed, and is located on the right side of the steering column.

The first two stages activate the Super Engine Brake,





RIGHT: The specially made tipper body features a hydraulic gull-wing tail opening, **BELOW:** The interior is highly functional for off-road work.



while the remaining three also involve the hydraulic retarder, providing the maximum braking torque. The braking system is based on drum brakes on all axles, with the possibility of excluding the anti-lock braking system (ABS) at speeds below 15 km/h.

The HD9 86.56, which has a tare weight of 24 100 kg, is equipped with a 24 m<sup>3</sup> Cantoni tipper (specially developed for Astra), made of high-strength steel, 12-mm thick on the bottom and eight-millimetres thick on the side walls.

The tipper, with a hydraulic gull-wing tail opening, is complemented by an oversized cab guard, designed for mining site operations. The tipper reaches a maximum tilting angle of 58°, and is equipped with an electronic weighing system that shows the relevant data on a control display placed in front of the driver's seat

#### **HEAVY-DUTY COMPONENTS**

The structure of the vehicle and the mechanical components have been designed for the heavy-duty applications. The first axle is a double-reduction Kessler unit (always double reduction) as are also the third and fourth axles, with a loading capacity of 20 t each. The ten-millimetre C-section chassis side members, spaced 820 mm apart, are made of high-yield steel with six-millimetre reinforcing internal C-profiles.

The HD9 front suspensions - first and second axles - feature parabolic springs supplemented

by hydraulic shock absorbers and two stabilisers (one for each axle), while those of the cantilever-type tandem rear axle have five parabolic leaves (40 mm x 100 mm) swivelling on a central pin.

The 8x6 is equipped with 325/95 R24 tyres. This solution allows an increase in the ground clearance of the main driveline components. a crucial feature for a vehicle designed for uneven terrain with deep potholes and large stones.

Despite the heavy-duty design of the truck, driver comfort has been increased thanks to the correct calibration of the cab

suspension and the redesigned interior, which ensures driver ergonomics while retaining the high level of functionality required by extreme off-road tasks.

#### AT THE STEERING WHEEL

With its automated gearbox, the HDg 86.56 does a good job in off-road operations. This is due to the fast (and higher revs) gear changing, managed by off-road transmission software.

The automated gearbox, however, requires some special precautions, especially on the most demanding terrain. In these conditions, it's better to use the gearbox in manual mode, by pressing the D (Drive) button on the dashboard twice.

The right speed can be selected using the multifunction lever on the right-hand side of the steering column - with a movement upwards or downwards. Once this operation is complete, the Cursor 13 will provide high torque at low revs (from 1 000 r/min).

The same predictive driving style is needed to engage, in advance, the differential locks, using the knobs on the console close to the driver's seat. The intarder-enhanced engine brake provides a powerful braking action, even when the truck is fully

A pleasant surprise is the comfort level of the cab as a result of the good suspension settings. Remarkably, finally the steering angle seems not to be heavily affected by the 8x6 chassis architecture.

As regular readers of FOCUS know, this magazine has been appointed an associate member of the International Truck of the Year (IToY)! FOCUS is the sole South African magazine to have joined this prestigious body. One of the advantages of this association is access to exclusive articles, specially written for FOCUS by ITOY jury members. This is one such article.





Volkswagen's sixth-generation T-Series (T6) shows why the Kombi name continues to be so enduring, says GAVIN MYERS

f there's one instantly recognisable name in the world of light commercial vehicles, it is Kombi. It's part of the Volkswagen (VW) T-Series range; a nameplate that has been around for 65 years and sold 12-million units during that time.

We received the T6 Kombi TDI DSG Comfortline for testing. It was immediately apparent that this new T6 version is a smart evolution of the T5. With its bold, horizontal double grille and mid-height cut lines, the T6 Kombi holds a dapper, yet commanding, presence.

This vehicle is about moving people, so it's the interior that really matters. Practical, comfortable and hardy are the descriptors that come to mind here... There is a huge amount of interior space and all eight seats are large and comfy. They're easy to access, too, and can be easily removed to reveal 6,7 m³ of total load volume.

Up front there are cubbies, storage trays and drink holders galore. The Kombi does miss out on the Caravelle's centre stack, though. In the pursuit of passenger comfort, heat insulating glass, rear ventilation and heating connected to the semi-automatic Climatic climate control system, and sun blinds on the rear side windows are fitted as standard. The whole floor is carpeted on the Kombi Comfortline.

Volkswagen claims the T6 is the most advanced T-Series model it has ever made. It has an intuitive five-inch Composition Colour radio with USB and SD card slot, and a Bluetooth hands-free facility, but what's really important is the range of sector-first safety systems.

These include Multi-Collision Braking System, which automatically brakes after an accident to reduce the risk, or severity, of a secondary collision, as well as the Driver Alert System. Standard in the

Kombi Comfortline, this monitors steering patterns and uses visual and acoustic warnings to recommend that the driver takes a break.

Our test vehicle was fitted with the 103 kW 2,0-litre TDI engine. Developing a maximum torque output of 340 Nm (between 1 750 and 2 000 r/min) and coupled to VW's generally faultless seven-speed DSG double-clutch gearbox, progress is smooth, strong and effortless.



It's relatively fuel efficient as well. VW claims it'll consume 8,01/100 km on the combined driving cycle and 10,2 in town – we managed an overall 9,1.

VW has gone to great lengths in tuning the T6 chassis for passenger comfort and good handling characteristics. Indeed, despite its 3 080 kg gross vehicle mass and 3.4-m wheelbase, the Kombi is surprisingly nimble while offering a supple ride.

The T6 Kombi is a comfortable, spacious people mover that, overall, is hard to fault. It is one of the best automatic vehicles in its class and proves the value and longevity of a good name.

Competitively priced at R629 700, it is backed up by a three-year/120 000 km manufacturer warranty and 12-year anti-corrosion warranty, as well as a five-year/60 000 km AutoMotion maintenance plan. **F** 



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Mastering a robust selection process meant that the Scania G460 was the ideal choice for Nugulu Bulk Carriers

gululu Bulk Carriers, one of South Africa's largest black-owned, heavyduty trucking operations, recently acquired 97 new Scania G460 truck tractors. The deal forms part of the fleet-replacement strategy of the 335-rig Ngululu Bulk Carriers fleet.

With its main depot in Steelpoort, Limpopo, Ngululu Bulk Carriers (a subsidiary of investment company, Ngululu Holdings) was established in 2002. It services the mining market with short and long-haul, sidetipper transport.



**ABOVE LEFT:** Management from Scania and Ngulula Bulk Carriers celebrate a new relationship.

**ABOVE RIGHT:** Executive chairman Chris Luvhani says the Scanias offer low lifecycle cost.

Most recently, the fleet has diversified its haulage capacity to include fuel tankers, tautliners for consumer goods and, in future, it will include flatbeds for multiple applications.

According to Chris Luvhani, executive chairman, Ngululu Holdings: "While 80 percent of our revenue comes from blue-chip companies based in South Africa, our focus is to operate in the whole of the Southern African Development Community (SADC) region. Our long-haul capabilities and efficiencies are, therefore, critical to our strategic direction.

"The Scania G460 went through a robust selection process, which included four weeks of test runs for comparative analysis with our existing benchmarks. Ultimately, the Scanias offered us the lowest possible total lifecycle cost."

Scania Finance facilitated the deal with a flexible and tailored repayment solution. The trucks are backed by a three-year/600 000 km driveline warranty and a full maintenance and repair contract.

The Euro-3, 343 kW (460 hp), 6x4 Scania G460 is ideal for on/off-highway applications, with 2 250 Nm of torque for effective tractive force off-road and in

mountainous conditions.

The semi-automatic Scania Opticruise transmission with a retarder assists in delivering optimal fuel efficiency, as does the aero-kit, which comes as a standard fitment on the double sleeper cab.

"The G460 delivers a fuel saving of between five and seven percent and has a lower tare mass than the other trucks in our fleet, which boosts the profitability of each trip," says Flip Myburg, executive director: Fleet & Technical, Ngululu Bulk Carriers. "Our drivers are also extremely happy with the vehicles' comfort and ease of driving."

Raimo Lehtiö, MD of Scania South Africa and executive chairman of Scania Southern Africa, says: "We are not just a supplier of truck hardware. Our dealer network extends to eight other countries in southern Africa, and is ideally positioned to support the Ngululu Bulk Carriers fleet as it expands into the region."

In conclusion, Luvhani states: "The combined elements of this deal, from the best-rate financing package and the efficiency of the truck, itself, to the extensive Scania support network in the SADC region, makes for a win-win situation."



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# Getting around CHINA

Transport in China has experienced major growth and expansion in recent years. Airports, roads and railway construction ought to provide a massive employment boost in the country over the next decade. CLAIRE RENCKEN reports

ailway, which is the primary mode of transport in China, has doubled in length since the mid-twentieth century, and an extensive network provides service to the entire nation. The larger cities have metro systems in operation, under construction, or in the planning stages. The highway and road system has also undergone rapid expansion, resulting in a rapid increase of motor vehicle use throughout the country.

Although China's transport system comprises a vast network of transport nodes across its huge territory, they tend to concentrate in the more economically developed coastal areas and inland cities along major rivers

The physical state and comprehensiveness of China's transport infrastructure tend to vary widely by geography. While remote, rural areas still largely depend on non-mechanised means of transport, a modern maglev train system was built in China to connect the city centre of Shanghai with its international airport.

Many of China's contemporary transport systems have been built since the establishment of the People's Republic in 1949. Prior to 1950, there were only 21 800 km of railway lines. In 2010, the railway



network had expanded to 90 000 km.

Although rail travel remains the most popular form of transport, air travel has also experienced significant growth since the late 1990s. Furthermore, the government-led effort - that began in the 1990s - to connect the country by expressways via the "national trunk highway system" had expanded that network to about 97 000 km by the end of 2012, making China's expressway network the longest in the world.

In terms of buses, in the big cities there are plenty

of buses and the bus system works quite well.

One could say that, until recently, China's economy was able to continue to grow despite deficiencies in infrastructure development. However, this is no longer the case.

The government has realised that, to keep the economy moving forward, it needs an efficient system in place to move goods and people across the country, which is why China is in the midst of this massive upgrade of its transport infrastructure. F

# **A TALL TALE**

Earlier this year, China caused a stir with talk about a "lane-straddling super-bus". According to an article in The Economist: "Headlines and half-page photos quickly filled the world's newspapers and web pages, trumpeting the Transit Elevated Bus (TEB), a magnificentlooking contraption that, it was claimed, would straddle China's streets, allowing cars to pass underneath it.

"Passengers could hop on and off from elevated platforms. This would allow the bus to cruise above the traffic jams that plague roads in urban China, while lessening the gridlock for others

"Befitting such a clever, madcap idea, the reaction was breathless. Although it crawled along on its inaugural journey, speeds would eventually reach 40 miles per hour, it was said, using rails running either side of the road. Its 300 passengers (1 200, once a few buses were linked together like train carriages) would travel in comfort, in something akin to an airport lounge. Of course, only in China could such a marvellous project become a reality.

"All of a sudden, though, the tone of the headlines changed. Something was amiss. 'China blasts its own radical public transport amid safety concerns', reported the Daily Mail. Some claimed that there had been no test journey after all.

"Important questions were left unanswered. How would such a bus pass beneath low bridges? What if a tall vehicle wanted to overtake



it (the clearance was just seven feet)? How could it warn cars when it wanted to change lanes? How could it go round 90° bends?

"The answer to all these questions, it seemed, was 'it couldn't'. According to China's state media organs (previously big boosters of the project) the TEB was little more than a publicity stunt - one of the dozens of peer-to-peer lending scams that have duped retail Chinese investors in recent years by promising unreal annual returns. The bus bust has thus become a symbol of a different – and far more damaging - kind of Chinese ingenuity.

"The TEB's promoters promised investors 12 percent returns on their money, despite the fact that the prototype bus seemed likely to tip over, couldn't clear most urban bridges and wasn't tall enough to accommodate most vehicles underneath it.

"They could get away with it, in part because those kinds of numbers are par for the course in China's lending industry, which averaged returns of 13.3 percent in 2015. Investors in the 'super-bus' will no doubt be licking their wounds."



American heavy-duty truck market.

At the time, VW was rolling out its strategy for global motor industry leadership and, recognising that its Scania and MAN truck operations did not have a substantial presence in that market, or access to the conventional (bonneted) models that would be necessary to make any realistic inroads, the prospect of acquiring Navistar had obvious attractions.

Since then, VW has had to confront its diesel emissions scandal, which is still receiving attention in the global media on a regular basis. Notwithstanding that enormous challenge, the group's latest longpresence in North America of cardinal importance, Truck & Bus had agreed to acquire a 16,6 percent stake in Navistar International Corporation, at a cost of approximately \$US 256 million (R3,65 billion), was a fairly predictable development.

#### **Overcoming obstacles**

Previously, we had pointed out that Navistar's recently concluded cooperation agreements with General possible opposition to this supplier of military



Regular readers of Global Focus have been kept



#### Just the beginning?

Some observers have heralded news of VW's buy-in as a financial rescue for Navistar. We can certainly see the benefits that will accrue to the German group from the association in the form of a ready-made North American product range, manufacturing base and distribution/product support structure.

Somehow, we don't think that a 16,6 percent shareholding will provide VW with the leverage that it desires over such a potentially important asset, and we are sure that the ownership ratio will be expanded. We would also not be surprised if VW's interests stretch beyond the truck manufacturing and marketing arenas to encompass other areas of Navistar's business.

On the other side, we think that Navistar International's export footprint in the global truck business is unlikely to be expanded beyond some limited sales of US-type conventional models in Australia. The prospects for a revival, or replacement, of the forward-control 9800 Eagle series, which was formerly very successful in South Africa, seem very slim indeed.

After all, both MAN and Scania have comprehensive ranges of suitable products for this market, so we don't see any point in creating additional in-family competition in a market that is currently contracting.

There would, of course, be opportunities for "badge engineering", but this is only likely to be considered in markets which are large enough to accommodate multiple parallel distribution strategies.

We certainly don't think that this deal will fully satisfy VW's appetite for acquisitions or joint ventures in important markets where it is absent or underrepresented. We were particularly interested in talks held with Isuzu Motors in 2011 covering "pickup trucks, diesel engines and larger trucks".

We have frequently commented on the desirability of Isuzu forming global partnerships to strengthen its participation at the upper end of the payload spectrum. Isuzu's current relationship with General Motors is important, but tends to be fragmented and variable, and the Japanese manufacturer recently

entered a new alliance with Russian manufacturer GAZ. It also concluded a pickup supply agreement with Mazda.

We believe that Isuzu would benefit greatly from a more inclusive global relationship, and that it would bring multiple quality inputs to the party, including a particularly strong global position in diesel engines and light-medium trucks and an extensive Asian footprint.

The present relationship with GM and the small Toyota shareholding in Isuzu may present as obstacles, but, in our view, nothing that a big fistful of Euros couldn't dislodge!

#### **NEW CRAFTER STANDS ALONE!**

VW is really hogging the headlines this month, and this particular story has run for nearly as long as the preceding saga.

It was back in 2013 that we first became aware that Volkswagen AG and Daimler AG were planning to end their highly successful cooperative "heavy van" building partnership, which had run continuously since 1995 and produced millions of Sprinters and Crafters

Now, in the second half of 2016, we have reached the identified target date for product separation, and VW's new stand-alone Crafter – which is to be produced at a new 220-hectare plant located at Września, in Poland – has emerged.

#### Much the same, but very different!

Appearance-wise, the new Crafter does not differ radically from its predecessor, which is understandable in a class of vehicles where function largely dictates form. However, the frontal styling is somewhat softer and definitely generic VW, with a less obvious "snout" than the previous generation Crafter.

Remarkably, the front-wheel-drive 4x2, and all-wheel-drive versions of the new model have a transversely mounted 2,0-litre diesel engine, while the rear-wheel drive 4x2 derivatives have a longitudinally mounted engine!

We can only imagine that this remarkable spectrum of driveline configurations has been made



possible by some highly creative chassis design, or at least two different floor plans for transverse and longitudinal engine variants. The east/west-located engines are also inclined eight degrees forward, to provide greater cab space.

(See page 12 for details on the electric version, the e-Crafter, launched at the IAA - ed.)

Euro-6 engine outputs range from 75 kW (102 hp) to 130 kW (177 hp), driving through a choice of manual or automatic transmissions. In the launch publicity, VW talks of "a maximum payload of 5,5 t", but we suspect that this is actually the top gross vehicle mass rating, to match competitive European vans.

The front suspension is by McPherson struts, with five available parabolic-sprung rigid rear axle layouts, and the power steering incorporates an innovative electromechanical system. Driver convenience and comfort are enhanced by an optional ergonomic suspension seat, electric windows and remotecontrolled central locking.

Safety and convenience features include lane-keeping assist, parking assistant, trailer manoeuvring assistance, adaptive cruise control, emergency braking, side wind assist, adaptive headlight dipping, reversing camera, and sensorbased side protection.

The new Crafter range includes no less than 69 derivatives, with van lengths of 5 986 mm, 6 836 mm or 7 391 mm, with three height options ranging from 2 355 mm to 2 798 mm, as well as Kombi people-mover and single- or double-cab chassis/ cab variants for specialised bodywork fitment.

The design includes numerous features to facilitate the loading and securing of payloads. Applicationspecific options include a second compressor, a second battery, a second air-conditioner, a separate heat exchanger, and a telematics-enabled fleet management interface.

The new Crafter order book will be opened in November, 2016, and a right-hand-drive version for the United Kingdom market is expected in the second quarter of 2017.

#### Crafter opening up new horizons?

It is clear that VW Commercial Vehicles has put a huge amount of effort into the creation of its own "heavy van", and it will be very interesting to see how Mercedes-Benz responds when the next-generation Sprinter emerges. We have found the evolution of VW as a major player in the global commercial vehicle business since 2000 to be most absorbing.

This unexpected change in strategic direction started when VW purchased a stake in Swedish heavy truck and bus manufacturer Scania. Global Focus has fully covered the subsequent roll-out of the strategy right up to the acquisition of Navistar

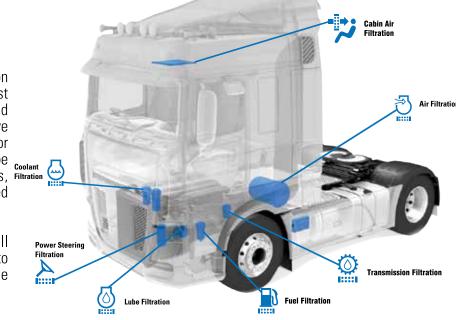




# The history continues..

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shares covered earlier, so we will not repeat the full story here.

However, we are still a little puzzled by the exclusion of VW Commercial Vehicles from the newly formed Truck and Bus division, particularly as the Crafter and the recently announced MAN van spinoff fit so naturally into the lower strata of the truck business. Maybe this situation will change later as the strategy rolls out.

The other interesting point is the possibility that the new Crafter will, like so many other European vans, migrate across the North Atlantic. VW clearly sees North America as a key area for future growth, as evidenced by the Navistar acquisition. The group has, however, suffered a severe setback in that market recently with the "dieselgate" scandal and needs to rebuild its credibility.



**ABOVE AND RIGHT:** Gordon Murray's OX is a very different animal from his earlier F1 and supercar designs.

The increased emphasis on commercial vehicles may end up as a very handy tool in giving the company something on which to concentrate its efforts while the consequences of the diesel-emissions and fuel-consumption scandal are addressed.

#### **GORDON MURRAY'S FLAT-PACK TRUCK**

Gordon Murray is a Durban boy, who rose to great heights as a designer of Formula One racing cars and the McLaren F1 supercar. Back in 1968, I had the pleasure of competing against him in a local hill climb, but my slightly modified BMC Mini was no match for his self-built and Lotus 7-inspired IGM clubman's sports car.

Nowadays he is known as Professor Gordon Murray and has acted as consultant on a number of revolutionary vehicle designs. This made him a natural choice to become involved in entrepreneur

and philanthropist Sir Torquil Norman's vision to design a cost-effective mobility platform for Africa and the developing world.

The resulting vehicle, dubbed OX, has been developed under the auspices of the Global Vehicle Trust, and the project has now been launched to the public with the objective of attracting investment and support to industrialise the design, which has already undergone comprehensive prototype testing.

The basic design layout consists of a small forward-control truck with a 1 900 kg payload capability, a three-man cab and a single 16-inch wheel at each corner. The steel ladder chassis carries bodywork manufactured from engineered plywood, and the rack-and-pinion steering is located in the centre of the cab (shades of the McLaren F1!) to overcome any debate over left or right-hand drive.

It is powered by a 2,2-litre Ford Transit diesel engine, driving the front wheels through a five-speed all synchromesh transmission, and the originators claim that it can equal a four-wheel-drive vehicle across a range of surfaces. The all-independent suspension works through a system of leading and trailing arms, coil springs and telescopic dampers. Disc brakes are fitted front and rear.

One of the more important aspects of the design is its ability to be "flat-packed" within its own chassis frame for ease of shipment and assembly overseas. Six flat-pack units can be transported in a 40-foot, high-cube container. It is claimed that three skilled workers can assemble an OX in approximately 12 hours.

The design also incorporates numerous handy features including a dual-purpose tailgate/loading ramp, and a rear bench seat that can double as a "sand ladder" to be

placed under the wheels to improve mobility in soft underfoot conditions.

This is not the first attempt at creating a basic transportation unit for developing markets, and it will certainly not be the last. Older readers may remember the locally-built Chevrolet Nomad pseudo-jeep of the mid-1970s, or Toyota's TUV "Ugly Truckling" of a decade later.

These projects have generally faded away because their very basic styling turns off potential buyers, who move on to buy more aesthetically attractive second-hand vehicles

The OX has no pretensions to be anything other than a working vehicle, suitable for areas where ability is more important than appearance, and is considerably larger than the other two products mentioned here, so it has a chance of succeeding if the right backing and marketing become available.



Global Focus is a monthly update of international news relating to the commercial vehicle industry. It is compiled exclusively for **FOCUS** by Frank Beeton of Econometrix. Do you have a comment or thought you would like to share based on this column? Visit www.focusontransport.co.za and have your say.

SHESHA LANE

# MBSA TRAINS 200 DRIVERS AS PART OF OCTOBER TRANSPORT MONTH

October Transport Month 2016 was themed "Together We Move South Africa Forward". For the month, Mercedes-Benz South Africa (MBSA) ran its FleetBoard complimentary driver training initiative. The company trained in excess of 200 commercial vehicle drivers as part of October Transport Month.

The brand loyalty of the drivers didn't matter, as the goal, according to Naeem Hassim, head of Fuso Trucks Southern Africa, was to create safer, healthier drivers in order to improve the industry.

"We strongly believe road safety is everyone's responsibility, and, therefore, decided to offer the complimentary training - even to those who do not drive our vehicles," he notes.

"Of course, without a healthy driver none of this is possible. That is why one of FleetBoard Professional Driver Training's objectives is to provide assistance to the Mercedes-Benz South Africa Trucking Wellness programme. The aim is to assist fleet owners in taking a holistic approach to employee health and wellness, based on a proven model that is supported by MBSA."



Hassim continues: "The common denominator in media reports on the importance of training is that having a culture of producing adequately trained drivers can drastically reduce road accidents and deaths. That is why we have embarked on this journey with fleet owners, drivers and other stakeholders.

"We will continue to ensure we are a major player in the drive to reduce fatalities and accidents on our roads. All our concerted efforts would be in vain if they did not involve the most important link in the chain: the driver. We need trained, tested and trusted drivers," he concludes.



# THE INSIDE TRACK **ON DACHSER**

Speaking to Detlev Duve, MD Dachser South Africa, at Electra Mining Africa during September, it's clear that the company is set for future growth in the African region.

"Once political and financial stability begins to take hold, we'll have a lot more business in Africa. - it's the market of the future." he remarks.

The company currently has fixed agency agreements with trustworthy agents in Africa. "As the delivery hub for the southern-African region, it's important for us to be able to link into the region to not get left behind," Duve adds.



Duve proudly displays Dachser SA's Freight Logistics Company of the Year award.

This is especially true in the mining industry, which accounts for up to six percent of the company's turnover at the moment. "This is despite sporadic investment in the mining industry and inability to determine exactly what'll happen in the following months," says Duve.

"We believe our presence at Electra Mining proves to the industry that we're interested in what it's doing. The current global Dachser CEO, and grandson of the founder, Bernhard Simon, visited the fair this year. He was very surprised at the quality of the industry and its suppliers at the show. He was joined by some international executives from the United Kingdom, Germany and American regions," Duve adds.

Part of the company's success is a result of the services it offers. This includes interlocking - where the company can offer supplier consolidation to clients as well as full digital integration of the entire Dachser network over the next two years.

"Our service of contract logistics has become prevalent and, with the experience of our mother company, we've been able to streamline a lot of the services we offer in Africa.

"Investment into South Africa is ongoing, and this is emphasised by the Freight Logistics Company of the Year award we won at the Transport Africa awards this year. It's great to get such recognition, which also speaks volumes about our staff; because they make the company tick," Duve concludes.

# **COMMERCIAL VEHICLE SALES REPORT FOR** SEPTEMBER 2016

Note: For the time being, Great Wall Motors SA (GWM) and Mercedes-Benz SA (MBSA) will only report aggregated sales data. The GWMSA and MBSA commercial vehicle market split volumes are estimates based on historical trends and forecasting techniques. The totals listed below do not include MBSA figures.

Light Commercial Vehicles < 3 501 kg	Total: 12 879
AMH	456
Fiat Group	82
Ford Motor Company	2 578
GMSA	2 141
GWM	27
Jaguar Land Rover	22
JMC	26
Mahindra	176
Mazda South Africa	52
Mitsubishi	4
Mercedes-Benz SA – estimate	14
Nissan	1 943
Peugeot Citroën SA	3
Renault	9
Suzuki Auto	41
TATA	110
Toyota	4 962
Volkswagen SA	503

Medium Commercial Vehicles 3 501 – 8 500 kg	Total: 783
AMH	27
Fiat Group	2
Ford Motor Company	5
GMSA	161
lveco	49
JMC	12
Mercedes-Benz SA – estimate	176
Peugeot Citroën SA	22
TATA	39
Toyota	225
Volkswagen SA	65

Heavy Commercial Vehicles 8 501 – 16 500 kg	Total: 478
Babcock DAF	1
FAW	69
GMSA	177
lveco	2
MAN	5
Mercedes-Benz SA – estimate	50
TATA	43
Toyota	78
Volvo Group Southern Africa	103

Extra-Heavy Commercial Vehicles > 16 500 kg	Total: 866
Babcock DAF	14
FAW	22
GMSA	47
lveco	52
MAN	153
Mercedes-Benz SA – estimate	278
Powerstar	21
Scania	226
TATA	18
Toyota	45
Volvo Group Southern Africa	268

Buses > 8 500 kg	Total: 87
GMSA	5
lveco	2
MAN	53
Mercedes-Benz SA – estimate	21
Scania	19
TATA	1
Volvo Group Southern Africa	7

<sup>\*</sup>Source: National Association of Automobile Manufacturers of South Africa (Naamsa).

#### AFRICA NO MATCH FOR BHL AND FAW

Buks Haulage Limited (BHL) has supplemented its truck fleet with the delivery of another 25 FAW 28.380FT truck tractors, which increases its fleet to more than 160 FAW vehicles.

The majority are FAW 28.380FT side-tippers, mainly for Zambian copper concentrate, and some dropside load carriers for timber work in Swaziland, among many other applications.

For Buks van Rensburg, BHL MD, transport operators need to acknowledge, accept and plan for the challenges that operating in Africa presents. This means the need to be flexible and have reliable drivers and vehicles.

"You must have the best of the best. First and foremost are my drivers. They are the most important asset in BHL," says Van Rensburg.

"Driving a laden vehicle of in excess of 52-t gross combination mass (GCM) over 2 400 km on some routes, requires a partner with impeccable trust, understanding and reliability. That's why I am committed to the FAW brand and why I keep ordering more FAW 28.380FTs," he says.

BHL's replacement policy is to solely run the 28.380FT. "It's simple - it is effective cost of ownership, together with a dependable, durable and easy-tooperate product. Most important is the great aftersales support we get from FAW," Van Rensburg reasons.

"Who can argue with 2,1 km per litre on a sidetipper and 2,5 km per litre on a tri-axle flat deck? Since I've changed to the FAW vehicles I have realised a ten percent saving on fuel alone over previous vehicles. On fleet utilisation I have increased my uptime from 65 to 95 percent," he adds.

Of BHL's 100 depot employees, 12 are FAW-trained

technicians who maintain the fleet. BHL holds parts and spares to the value of R5 million and can even conduct rebuilds.

"We've seen concrete evidence of FAW's durability, reliability and simplicity. Our drivers love their FAW trucks. BHL follows a one-driver-one-truck policy. The 28.380FT has the best uptime - a big incentive for drivers, too. Keeping our well-trained drivers comfortable, the FAW provides a cosy cab with airsprung seats and all the necessary creature comforts," says Van Rensburg.

At the handover of the new vehicles, Van Rensburg addressed his drivers who had just completed their driver training at FAW headquarters: "You are my business. Each and every one of you is responsible for our success." He went on to acknowledge their sacrifice and dedication; thanking them for their driving excellence and willingness to live a harsh lifestyle in one of the most challenging jobs.

The routes are the arduous: for example, a 179 km drive from Chingola to Solwezi takes six hours. Each vehicle is equipped with satellite tracking and all of its drivers are given mobile telephones.

For Van Rensburg, the FAW group is part of his team. "FAW aftersales support and personal attention is unrivalled. I've received the best support from the FAW group. The company understands my business and knows what is important to its viability," reiterates Van Rensburg.

He concludes: "Our business is only as good as our people - partners like FAW and Afrit, which supplies our trailers. BHL is very fortunate to have a committed group - people and companies, who believe any job is possible and everything is an opportunity."



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Public transport in most developing countries is an ever-changing mix of independent operators all following their own rules, routes, schedules and rate hikes. The result is an erratic and often unreliable system. A recent study conducted in the city of Kampala, Uganda, shows that smartphone technology could offer a brilliant solution and bring some structure (and huge benefits) to this chaotic environment

or myriad reasons, the infrastructure in developing cities, especially in Africa, stagnated while globalisation and the demand for public transport exploded. Most governments were too slow (or too poor) to react and private transport is too costly - only nine percent of commuters in Kampala make use of private transport.

This created a prime opportunity for clever entrepreneurs to pounce on the gap in the market and, as a result, privately owned minibus taxis (also known as matatus or trotos) transport 83 percent of all Kampala commuters on a daily basis.

The problem is that there seems to be no rhyme or reason to the schedules, stopping points, routes, or even pricing. All of this is seemingly done at the whim of the driver or owner of the taxi.

Look closer, however, and you'll see some patterns emerge - all guided by commuter needs and existing or temporary infrastructure, such as unofficial taxi ranks. These underlying patterns are what prompted the clever people behind the Kamapala study to see if they could help the citizens of this dynamic city to officially map its organic public transport system.

The truth is, cities such as Kamapala desperately need some type of structure when it comes to public transport. Without a clear picture of how the city moves its citizens, commuters cannot effectively plan their trips to and from work, school, or any other destinations. This is inefficient and costs both commuters and operators a lot of time and money,



which, in turn, has a negative effect on the economy as a whole.

As the population of Kampala grows and the city expands, the problem will only get worse. In 2012 the greater Kampala region had a population of 3,15 million people.

According to the World Bank, this will double to 6,3 million by 2020 and by 2040 Kampala will be a city of 12,6 million people. Efforts to organise the transport system therefore need to be made now, before the task simply becomes too overwhelming.

#### **HOW SMARTPHONES MAKE A DIFFERENCE:**

In 2015, the Department of Electrical and Electronic Engineering at Stellenbosch University started a project to map Kampala's public transport system using smartphone technology. The project was funded by GoMetro - a mobile App that supplies public transport information to commuters in cities around the world.

Students and volunteers, armed with the energy of youth, smartphones and the GoMetro Pro App (this version allows the GPS tracking and storage of route data) hit the streets of Kampala to start the first phase of the mapping process. This involved documenting the GPS coordinates of all official taxi ranks, as well as the routes that originate from each one.

They then moved on to record all the minor taxi ranks (that have developed organically over the years) as well as their connecting routes.





All of this information was collected on GoMetro's central database. The team also noted the number of taxis departing from each taxi rank, as well as the frequency of departures. During this phase they also collected information on destinations by determining where each taxi was headed.

Phase two was all about tracing the routes leading from all the taxi ranks. In this case, students and volunteers boarded taxis and set out toward various destinations. The GoMetro App automatically stored their GPS locations every 30 seconds and the team members manually tagged all stops along the way.

This information was used to work out the exact route used by the taxis and to calculate the number of stops (formal and informal) on each journey.

In the third and final phase, the team made use of QGIS, a free Linux Geographical Information System, to compile all the data. All the GPS information collected was overlaid on a road map of Kampala. Using specialised software, the team was able to plot all the trends and figure out how to classify all the routes and stops.

In the end, the hard work paid off and the results were fantastic. By mapping the overall trends, the team was able to put together a schedule showing the times when the majority of taxis tend to depart all the mapped taxi ranks.

This allowed them to confidently set up an informal schedule. For example: If a commuter goes to taxi Rank A at 07:00, they are likely to find ten taxis ready to depart along Route B heading to destination C.

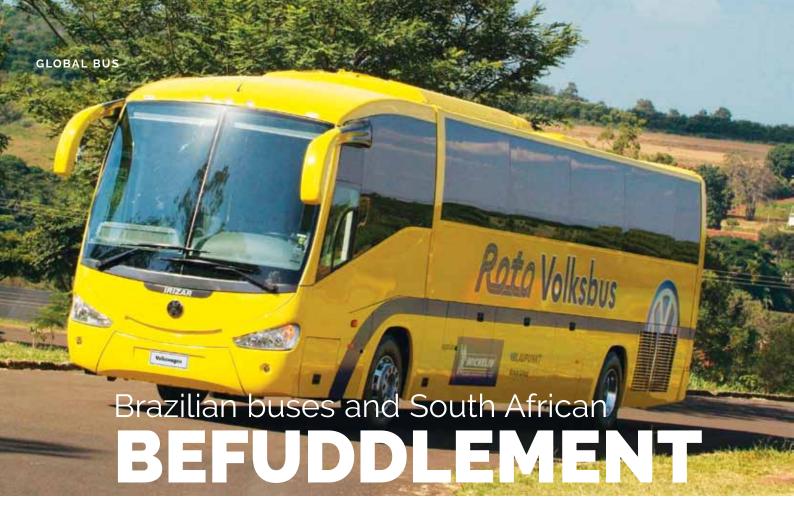
The results may not be as accurate as train schedules in Sweden, perhaps, but it is a huge step in the right direction for Kampala. Using the GoMetro App, Kampala residents and visitors can now effectively plan their time and journeys with reasonable accuracy.

Taxi operators, on the other hand, can run a more efficient business by ensuring they're at certain stops at specific times instead of driving around looking for

In the long run, this study and the use of the GoMetro App could lead to a more structured and effective public transport system for Kampala. Through crowdsourcing it is possible to keep refining the existing data and to add any new routes that spring up, or reclassify routes that grow from minor to major status.

Tireless volunteers and the magic of smartphone technology have given the city of Kamapala a major boost toward developing a more efficient and organised public transport system. All parties benefit from the process and it proves that developing cities don't need to spend millions (that they don't have) to create a new public transport system from scratch.

In the end, the project was a huge success. By optimising and organising the system that's in place, Kamapala is showing the way forward for developing cities around the world. It also goes to show that students with smartphones aren't always such a bad thing...



FRANK BEETON reports on Brazil's ailing bus industry and the possible implications for South Africa

n recent years, we have become accustomed to Brazil being an important supplier of buses to the world market. The South African market, in particular, has been drawing chassis and complete bus requirements from Brazilian sources for some time.

This has primarily been because the Brazilian industry has remained committed to the design philosophy of a traditional chassis and separate body bus and coach, while many other manufacturing countries have adopted the integral (monocoque) construction method.

Importantly, the Brazilian bus market has also continued to demand the availability of front-engined. ladderframe bus chassis, which is a design layout favoured by many South African operators.

Brazil's ability to continue building vehicles to these favoured design criteria has been enabled by a healthy domestic market, and those of a number of neighbouring South American countries that have been happy to follow the Brazilian example.

However, since the Brazilian domestic economy went into recession at the beginning of 2015, demand levels have been slashed, with the market for bus bodies having declined from 16 978 units in the first half of 2013, to only 5 235 units in the first six months

Sales of bus chassis also declined by a margin of 41,2 percent from 9 658 units, during the first half of 2015, to just 5 683 units in the first six months of 2016.

Fortunately, the bodybuilding industry's healthy export business has helped to stabilise the situation by regularly returning sales of around 1 800 units for each January to June period since 2013.

Export efforts have undoubtedly been supported by the falling foreign exchange value of the Brazilian real, while the bus industry's extensive use of locally procured components has served to reduce its exposure to cost increases related to imported content.

Of the chassis manufacturers, Mercedes-Benz led the standings during the most recent reporting period (January to June 2016), with 54,7 percent of the available sales, followed by MAN/Volkswagen with 16,22 percent, and Agrale on 16,17 percent.

Of the body manufacturers, Caio-Induscar led the domestic sales race during the same timeframe with 33,7 percent penetration, followed by Marcopolo (27,1 percent) and Neobus (13,5 percent). Marcopolo was the clear leader among bodywork exporters, having accounted for just more than 50 percent of total shipments.

South African importers and operators have a significant vested interest in the survival of the Brazilian bus industry; for continued availability of favoured products, and the parts to keep them operational.

Potential sources for front-engined, ladderframe bus chassis have diminished in number, and local users must rely on sustained demand in markets such as South America and India to ensure that these products remain available.

For this reason, a number of local boardrooms are sure to be keeping a close watch on the Brazilian economy, and hoping for early signs of revival.



While formal public transport agencies in the developed world are proposing partnerships with the likes of Uber, in South Africa the focus is not where it should be

s I write this, we're trundling our weary way through October Transport Month. As we do this, remember that most of its activities have been disconnected with reality.

In 2014, the Soweto Business Express was introduced, which ground to a halt six months later. In 2015, there was the grand opening of cycle lanes in Sandton; a programme now put on ice by the incoming Metro council.

So what is in store for October 2016?

I have no idea ... so, while we wait, let's note that organisations like Uber and Lyft are being approached, by formal public transport agencies in the developed world, to take over from underperforming bus services in low-density, carrich areas. The October 1 issue of The Economist gives a summary of the current situation worldwide.

In addition to Uber, Lyft and Bridj, we have the rather bland GoDrive and DriveNow, as well as the catchier Voom, Zum, BlaBlaCar and UbiGo - each one representing a different combination of options for the user.

However, the article stresses that these new schemes will have limited impact in developing countries, singling out Mexico City with its 50 000 minibuses as an example. That also applies to South Africa – even though Uber and others have a foothold here, we still need to first sort out our chaotic public transport situation.

Many thousands of commuters spend well over 60 minutes in public transport each day, putting

them outside the reach of impractical cycle paths and expensive hired cars. Government's first priority should be to keep this group happy.

Right now the news in South Africa isn't encouraging...

The Gautrain continues to place advertorials in the media repeating the falsehood that its expansion "is part of" a non-existent 25-year plan.

During this transport month, one particular dialogue, in which the Gautrain will take part, will consider the question: "Is there a case to be made for looking beyond the traditional cost-benefit analysis in cases where the investment may make the cities more sustainable over the long term?"

(Read: we probably won't be able to come up with benefits remotely related to the costs, so let's confuse people even more by throwing the net wider.)

The expansion of the Gautrain involves a number of new stations that are seven kilometres apart, on average. That will require a vastly improved network of bus services, but Gauteng's record in running public transport - whether buses or the Gautrain shows that it doesn't seem to know how to get value for money.

Its 2016/17 transport budget reveals that it spends R2,3 billion on keeping buses on the road, operating on 3 047 routes. That sounds like a lot of routes, but there are only five trips a day on each route. That number of trips needs to increase at least sixfold but, with another R1,8 billion already going to the Gautrain, there won't be enough money to go around.

Turning to Ethekwini, we read that Go!Durban has signed a memorandum of understanding with the local private bus operators association. Now that's good news - it should have happened 80 years ago. Many of these buses operate along North Coast Road and South Coast Road, which carry enough buses over at least 30 km to justify electrification (either light rail or trolleybus).

Individual operators have never had the resources to start operating a capital-intensive mode, but, in cooperation with each other and with the city, such a scheme can fly.

Not so encouraging is the plan to spend R23 billion on a fast-rail line to King Shaka airport - that's in addition to the R22 billion already committed to other projects. Bearing in mind that there was no feasibility study for the airport itself, perhaps Go!Durban is hoping that no one will ask too many questions about this rail link either.

Meanwhile, the municipality continues to offer a

woeful bus timetable. If Durban was serious about public transport, it would have started to clean up its existing services long ago.

In Cape Town, the city council is, presumably, overjoyed at the court decision to disallow tolling of highways in the area. This might sound like a big victory, but I fail to see how this will relieve congestion - the daily grind along De Waal Drive during the morning and afternoon peaks won't go away.

Sanral would not have to widen freeways, let alone toll them, if basic public transport was improved.

Here's an example from Cape Town: Golden Arrow Bus Services still runs a service to Sea Point, duplicating the MyCiti bus rapid transit. If these buses were transferred to operate from, say, Stellenbosch to link up with the MyCiti service at the airport, Cape Town would start making a very small dent in the traffic problem there.

Let's see what October Talk-shop Month produces in 2016! **F** 



Vaughan Mostert lectured on public transport issues at the University of Johannesburg for nearly thirty years. Through Hopping Off, Mostert leaves readers with some parting food for thought as he continues his push for change in the local public transport industry.

## JOBURG'S BUS SERVICE APP NEARS COMPLETION

Public transport commuters can now enjoy enhanced journey planning by downloading the second phase of the City of Johannesburg's VayaMoja mobile app. The app has been developed as a joint effort between Intervate (a T-Systems company), and the City of Johannesburg as "part of the move toward a public transport system that is seamless and integrated".



The VayaMoja app allows commuters to access information on all Rea Vaya and Metrobus routes, bus frequencies and stops, as well as fare information. The first phase of the app was released in July.

"Currently, users can see bus routes and stops, but they don't have a sense for when the next bus is coming. We are now ready to roll out the second phase of the VayaMoja app service," says Craig Heckrath, who heads up the Smart Citizen product team at Intervate.

"We've partnered with a vehicle-tracking company to have tracking units installed in all buses across Johannesburg. Now that we know the location of every bus, and the direction and speed at which it's moving, we will be able to create a reliable, predictable public transport experience for commuters," he explains.

The intention of the app is to empower commuters to plan a journey based on their current location and their destination. Users will now be able to search destinations, select routes and see bus arrival times.

"This phase of the VayaMoja app development will get us closer to enabling the commuter to make better decisions when navigating the complex Johannesburg transport system, as they'll be able to track bus movements and get timing estimates directly on the app," Heckrath adds.

"We're doing our best to speed things up and by the beginning of 2017 we should have reached full functionality - which will enable commuters to engage in end-to-end navigation through the VayaMoja app," Heckrath concludes.

The VayaMoja app is available free of charge from the app stores for both Android and iOS platforms.





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