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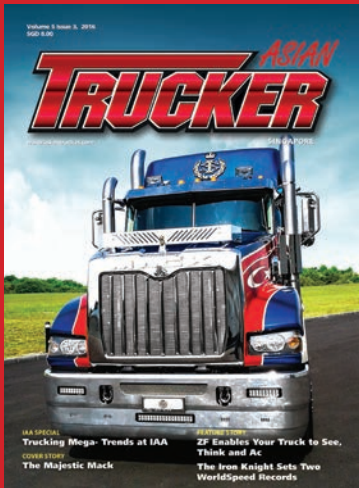
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Driving Self-Driving Intelligence

There are many developments that need to happen, but autonomous driving will become a reality, writes Floyd Cowan.

I found the Second Autonomous Vehicles Conference, held in Singapore January 30 – 31, 2018, to be quite fascinating. It was fascinating not just for what is foreseen in the area of vehicles that can drive themselves, but where developments are already at.

Safety First

There are compelling reasons to make autonomous vehicles happen. It is simply in the nature of humans to continue to develop and improve on what we have. Simply knowing that it is possible is all the motivation people need to make it happen.

Safety is another important reason for developing self-driving vehicles. The statistics are staggering. A number of the speakers talked eloquently about accident statistics, but it was Associate Professor Dr Hussein Dia's statement that moved me: "Nearly 1.2 million people die in road traffic crashes worldwide every year. This is the equivalent of 15 widebody aircrafts, each with 200 passengers, falling out of the sky every day and killing everyone on board."

We really can't allow that to continue.

Sharpening the Focus

When a health epidemic happens, falling a handful of people in comparison, a lot of resources are invested to eradicate the disease. As most of the automobile accidents that happen are human error we must do more to reduce accidents. Previously, impaired driving was one of the most significant contributors to accidents, but now, in some jurisdictions, distracted driving is the major cause of accidents. It seems we can solve one problem, but then a new one crops up. Autonomous vehicles will do away with most, if not all, of these accidents.

Autonomous vehicles are already here. But they are in restricted areas. Vehicles on rails or in short routes in controlled

conditions. Many vehicles have the early requirements for a vehicle to be self-driving – braking and lane change warnings, but there is still a long way to go.

Specialization

Technological areas that will be required or improved are becoming more distinctive, so specialized companies can produce the needed products. For example, imaging technology, cameras, will have to be further developed. They will have to work in all conditions, from bright sunlight to tropical downpours.

At this conference the legal implications were less discussed than in the first edition a year ago. I got the feeling that though all the legal challenges have not yet been worked out, they will be.

Rally Round Me

It will be a different world when we travel in vehicles that we don't control, but when I was working on the Dakar Rally story it occurred to me that this is one area where the technology cannot take over. Such sports are about humans using the machines to outrace other people. It just would not be the same if the machines were doing all the work.

The competitors in the Dakar Rally talked about the challenges and the fatigue they feel in these week-long competitions. That is what it is all about. It is about people making the machines work to their utmost, not the machines being in control. Motor sports such as the Dakar Rally and Formula 1 have been testing grounds for new technology and I believe they will continue to be in the future. But just as the competition tests the machine it tests the people, and that is something that I don't think will ever go away no matter how smart the vehicles get. **F**

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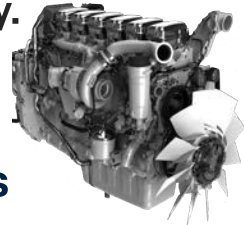


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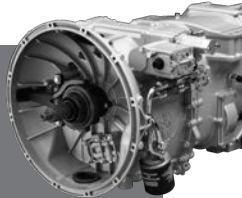
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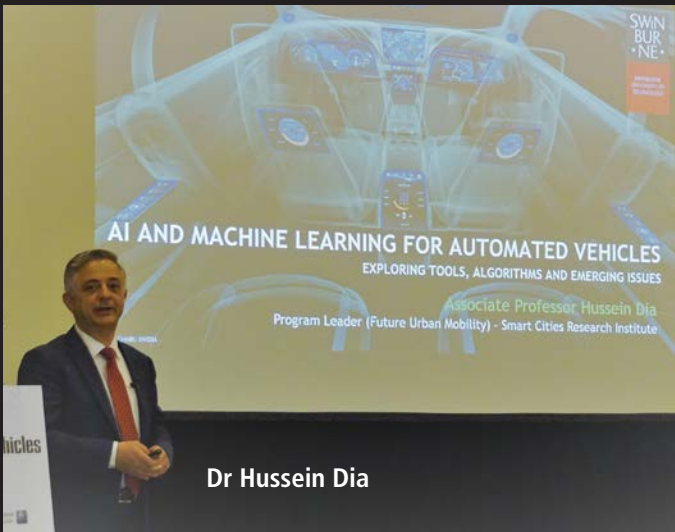
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Dr Hussein Dia



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When will Vehicles Become Entirely Autonomous?

The road to having fully autonomous vehicles is a long one with many issues that need to be addressed and problems to be solved. The Second Autonomous Vehicles Conference held in Singapore addressed all these issues, writes Floyd Cowan

“One thing most people agree on,” Centre for Sustainable Infrastructure, Swinburne University of Technology, **Associate Professor Dr Hussein Dia** stated, “is that self-driving vehicles can have a positive impact on road safety. Nearly 1.2 million people die in road traffic crashes worldwide every year. This is the equivalent of 15 widebody aircrafts, each with 200 passengers, falling out of the sky every day and killing everyone on board. This wouldn’t be accepted in air travel. It is shocking that it continues on our roads today. In addition to the pain and suffering, these crashes are estimated to cost more than \$500 billion each year. Human error causes

70-90% of crashes. A large proportion could be avoided by using self-driving vehicles. There is compelling logic in removing humans - the key source of error - from the driving equation. Driven by Artificial Intelligence, these vehicles will not make errors of judgement the way a human driver does. They will not drink and drive. They will not fall asleep behind the wheel. And they will not get distracted by playing Pokemon Go!”

Autonomous Vehicles are not something from **Science Fiction** that will arrive in the distant future – they are here now, but challenges need to be overcome before



(From Left to right) Dr Henriette Cornet, Mahesh Shinde, Vivek Vaidya and Syafiq Yusoff,

they are a common sight on our roads. Dr Dia was speaking at the Second Autonomous Vehicles Conference, held in Singapore January 30 – 31, 2018. He was one of 22 speakers, experts in their field, who made presentations. They came from many countries and covered a broad range of topics from legal considerations, testing, certification, safety, and public acceptance.

In Dr Dia's presentation on Artificial Intelligence and Machine Learning for Automated Vehicles (AV) Exploring Tools, Algorithms and Emerging Issues he opined, "The real disruption that will totally remove the driver and transform the economics of mobility, comes at Level 5. The journey to Level 5 has only just begun. Full automation is hard because it requires solving problems beyond technology."

Keynote Speaker **HE Dr Laszlo Palkovics**, Minister of State for Higher Education and Responsible for Coordination of Research and Development of Autonomous and Electric Vehicle Systems in Hungary stated, "It could be several more years before a Level-5 fully-autonomous car rolls out of an assembly line, but there are encouraging developments. Bottom-up and Top-up autonomous technologies and platforms are being developed at breakneck speed and we are starting to see the development of test-beds. At the same time, vehicle trials are being conducted globally for autonomous cars, trucks and trains and that bodes well for the industry."

Hungary is building a multi-level testing environment where vehicles would be tested on public roads, limited public roads, proving grounds, in the laboratory and through simulations. Hungary's test track layout (265h) can test high speed components and AD testing.

Dr Palkovics stated that modes of mobility will change. "Can we take away the enjoyment of driving from the driver? As with other co-operatively drivable vehicles (planes, boats...) we must be ready to manage the vehicle to handle dangerous situations while having human participation with unperfect and very different abilities. What is the base of the decision if we must choose from two bad options?"

Peter Kelly, Managing Director of LMC Automotive spoke about the Benefits and Barriers for the Adoption of Self-Driving Cars. "Autonomous driving is at the cusp of transforming and redefining the boundaries of the automotive industry," he stated. "By 2020, nearly 250 million cars will be connected to the Internet and by 2030, one in seven cars will have level-3 automation or higher. By 2035, the core market for self-driving vehicles is expected to reach USD560bn. The holistic solution could be hardest of all. Full autonomy."

While some speakers felt that AVs would reduce road congestion Mr Kelly was less certain. He expects that shared autonomy vehicles will see an increase. Substitution may reduce overall ownership levels. However, "There is uncertainty over what the extent of substitution will be. Nobody knows how many vehicles will be substituted for each AV."

"Highly automated cars have to be safe!" stated **Marius Dupuis** Managing Director VIRE'S Simulation of Highly Automated Driving Functions when he spoke on the topic of Virtual Testing and Stimulation of Highly Automated Driving Functions. "When it comes to responsibility, when the judiciary is involved we will need legislation. Certification will be needed. Today, it is the driver's license. The driver takes a test to become certified. The Autonomous Driver needs to be trained and tested. Standards will need to be set, and validation tools will be required." He believes that the coming years will see evolution not revolution.

After the morning tea break and networking session **Dr Henriette** Cornet moderated the Interactive Panel Discussion: Determining the Infrastructure Requirements that are Crucial to Support Automated Driving that included speakers **Mahesh Shinde**, GM, HEAD - ERC (Indoor testing) Tata Motors, **Vivek Vaidya**, Vice President, Frost & Sullivan and **Syafiq Yusoff**, CEO Riverwood.

Mr Vaidya said, "AVs are unlikely to pop up, but come into the mainstream gradually. There are a lot of applications that will be easy to apply, for example, auto parking. Park and retrieve the car without human intervention. Such applications will get in first."

The **human aspect** was Mr Yussoff's focus. "We really need to understand what people need to do to adapt to the economy to come. Will it lead to a loss of jobs or will it create new jobs? We need to prepare for what is to come over the next 5 to 10 years."

"What do we mean by infrastructure?" Mr Shinde asked. "AVs need different infrastructures. Development in electronics is necessary such as sensors that give **high accuracy**. In the tropical region it suddenly starts raining heavily. If the sensor doesn't give you the images required, then you have a problem. We are in a transition state. In countries such as India and Sri Lanka, the infrastructure is not ready for AVs."

"Regulators have the challenge of taking consideration of every angle," Mr Vaidya postulated. "When it is being pushed up to the next level of development will a vehicle be able to decide between hitting a tree or hitting a human? Each step is critical."

Safety is a great concern of **Andrew Mehaffey**, Director New South Wales HMI Technologies Responsible for the adaptation of HMI Technologies. Making the case for AVs he showed a picture of a horrific crash. "The driver was driving on the wrong side of the road. All five of the people in the two cars died in that crash. The road surface was good, the weather was good. The crash was caused by human factors that wouldn't have happened in an AV. This drives it home that the move to AVs can't happen soon enough. They will be vehicles that won't run red lights, won't drive in the wrong lane, won't run into the car ahead of them, won't hit trees, won't drive drunk or be distracted."

Mr Mehaffey believes that in the future people won't be allowed to drive a car. "We will have to go to a racetrack." This is why public acceptance is extremely important. "This is going to have to include first-hand assessment of the technology as it is never quite the same as seen in promotional vehicles and press release often don't tell the whole story."

Thomas Webster, NTU Senior Research Engineer, CETRAN Energy Research Institute @ NTU in his presentation, Understanding Singapore's Regulatory Framework for Autonomous Vehicles, pointed out that Singapore cannot continue to grow at its present rate, adding roads and vehicles. Singapore's utopian view of the future is fuelled by the need to reduce demands on public transport and increase in utilization of AVs to reduce and improve traffic flow.

With AVs already in limited use in semi-controlled spaces one problem that emerged is with people deliberately stepping in front of the vehicles to see if they would stop. As a result, Singapore has passed a law that people who deliberately interfere with AVs can be fined.

Mr Webster talked about AV Trial Testbed in Singapore. Numerous tests are being conducted at the Cetran Circuit that was jointly developed by LTA, NTU and JTC. "The test track has two purposes," he pointed out, "One is for the partners to test vehicles and people who want to conduct their own test can rent it out."



Lars-Erik Forsbergh

For safe and seamless integration onto public roads, AVs need to be tested on their communication and interaction with other vehicles, road infrastructure and elements as well as dispatch and routing systems. To facilitate the testing of AV navigation controls in a real-world environment, CETRAN is designed to replicate Singapore's roads, with common traffic schemes, road infrastructure, and traffic rules. The circuit features a rain simulator and flood zone to test AVs' navigation abilities under different weather conditions.

Dr Henriette Cornet Principal Investigator of Design for Autonomous Mobility, TUM-CREATE and **Dr Aybike Ongel**, Principal Investigator of Design for Individual Mobility Vehicles & Services TUM-CREATE gave presentations on Leveraging Autonomous Vehicles for Public Transportation in Singapore.

Dr Ongel said Singapore's goal is to have 75% of trips during morning/evening peak be on public transport by 2030 with 85% of all public transport journeys being less than one hour. "Today's public transport systems are essentially built on 1950s technology," she stated. There is a gap between MRT and buses. That gap needs to be filled." The Semi-Rapid Transit System (SRT) is being designed to fill that gap. It would involve platooning and would run on the roads.

Dr Cornet spoke to the design of SRT Vehicles. TUM-CREATE's Digital Research Lab looks at designs of vehicles with a focus on passenger comfort. "We do research on human factors. We look at how people behave in Singapore. Based on their needs, wants and lifestyle they will want different things. Ease of use and accessibility are important, and we need to determine if people are willing to accept the new system."

Paul Chou, Secretary General, Taiwan Telematics Industry Association, gave an energetic presentation: Tech Hub of TECA (Telematics for Electrified Connected and Autonomous Vehicles) in Asia - Challenges and Opportunities for OEMs.

**Paul Chou**

"Taiwan has become a hub of high tech service in AP region," Mr Chou stated. "**Taiwan** has an excellent performance in International Rankings being named the Number One most innovative country in Asia."

Taiwan has a Competitive Advantage in ICT Products Mr Chou continued. "Ten years ago, Taiwan's government set up the Taiwan Telematics Industry Association to conduct services and functions in the Telematics Industry. The result was that Taiwan has become a market leader."

Speaking about the visions and achievements of electric vehicles in Taiwan he said the goal by 2030 is to phase out internal combustion engines for motorcycles and by 2040 phase out internal combustion engines for all vehicles.

On the topic of EasyMile EZ10 Deployments: Autonomous Shuttle Use-Cases Problems & Challenges **Alexandre Pequignot**, Sales Manager South East Asia EasyMile, stated that by 2050 of the 9.8 billion world population, 66% would be urban. "In the megacities people will travel longer to get to their offices." The switch from private car ownership to public transportation needs to be efficient and reliable, he continued. "Mass transit systems are key to keeping traffic congestion contained."

Speaking of the **Door to Door Challenge** he used Singapore as an example where car ownership is very high and finding parking is difficult. Public transportation is fairly cheap, but there is still traffic congestion during peak hours.

Mr Pequignot says the solution is: "On demand and a single use ticket with seamless integration and a seamless user experience. He spoke about automated vehicles that are now operational such as the EZ10 Driverless Shuttle for the First/Last Mile. EZ10 Driverless Shuttles are in use in theme parks. "You can catch an EZ10 at Bayfront MRT that provides a shuttle ride around Gardens by the Bay. The EZ10 takes about five minutes while to walk would take about 20 minutes.

In the session, Securing all End Points: Understanding the Role of Cyber Security in Autonomous Technology with speaker **Paul Lothian** Director Cyber KPMG Singapore noted: "Automobiles have evolved into highly complex computers on wheels. Ensuring robust cyber security is becoming increasingly critical for the success of AVs. This is partly due to the inter-connectivity between AVs and the Internet, which opens vehicles to hacking and other malicious attacks on its advanced electronics and sensors. In order to enable safe adoption of AVs, the core technology must be secured at all times."

Mr Vivek Vaidya gave the first presentation of Day 2: Artificial Intelligence In New Mobility Solutions "Self-learning is the stepping stone for AI Implementation," he pointed out. "Self-driving learns by the way it is used. Every day you go to work at 8:00am, most likely to your office. Most likely you will play the same radio station, most likely to check a few things. The car will learn your preferences. At Level 4, which we will reach in about 2025 the car will act as a personal assistant. Your car will learn from other cars. Machine to machine going to be the backbone of Artificial Learning.

"AI powered cars are expected to surpass human intelligence beyond 2025. Cars will be able to drive better than humans. They will have information that humans don't. It will have access to weather information, road information."

Mr Vaidya was followed by **Pang Mei Yee**, DHL Vice President of Innovation, Solutions Delivery & Service Management – Asia Pacific who Examined the Implications Of Autonomous Vehicles Technology On Logistics and Warehousing Operations.

"Self-driving vehicles in warehouses have the ability not just to transport goods, but also to combine other process steps such as loading and unloading in order to increase the overall efficiency of an entire process. In addition to providing efficiency gains, self-driving vehicles can significantly increase safety in transport and loading processes.

While most speakers talked about future developments **Lars-Erik Forsbergh**, Managing Director, Volvo Trucks Hub, SE Asia spoke about how autonomous vehicles and features are currently being used in Volvo vehicles. "Safety is the core of my presentation," Forsbergh stated. This is our strongest commitment, to develop products to reduce accidents and improve road and driver safety. Reducing human factor.

Safety Innovations that Volvo Trucks has implemented are: 2008 Driver Alert Support, 2012 Collision Warning with Emergency braking, 2013 Volvo Dynamic Steering. These safety products are in serial development. They are bases of fully Autonomous Trucks. Mr Forsbergh continued: "The truck can do a 365° scan around the truck. It is an assistant driver. Connectivity and automation will eliminate accidents. The technology is there, now we need standardization between truck producers and with society."

Alexander Mastrovito, Head of Sustainable Transport Solutions, Scania Asia & Oceania presented a Case Study: Boosting Productivity in Trucking and Freight Industry through Platooning Technology. "Autonomous Vehicles are only part of Sustainable Transportation," Mr Mastrovito began. "Denser and larger mega cities are putting pressure on us to come up with more and better solutions. Pollution, congestion, Co2 and other challenges are changing the way we live. Three main benefits of AVs are lower fuel, less congestion, safety. CVs can increase productivity by doing more with less. Platooning is one area that we can do this. Driving closer together reduces air drag and lowers fuel consumption when driving 70 – 90kph. At lower speeds there are no savings."

Koen Cardon, CEO, Kateon Natie Singapore, one of the largest transport companies in Singapore, spoke about the Experience in Launching Singapore's First Autonomous Truck (see Issue 4, 2017, Asian Trucker, Singapore).

The impetus to develop an autonomous truck came from manpower costs going up every year. "We wanted to work with an OEM. They told us to come back in five years. Not what we were looking for. We wanted it now. So we worked with an SMU team. The students looked for eight months at what technologies are out there. We needed to find people who were committed to work with us. We knew what we wanted, and we found people who wanted to work with us. The stakeholders, our customers, were the hardest to convince. We **demotivated** the 250 drivers at the plant who could only see that they would be out of a job. We told them they would get more challenging jobs.

"Could we guarantee that it won't be a **safety hazard**? We responded that we are going to make it safer than existing operations. Drivers hit poles. We are going to improve from where we are. We are not saying this is 100% fool proof. But to date, with over 85,000 moves per day, there has been no lost time. The technology is there."

Autonomous Driving in India – Challenges and OEM's Perspective was discussed by **Mahesh Shinde**. He began his presentation by asserting that the market centre of



gravity is shifting towards Asia. He noted that 260,000 cars a month are sold in India. "ADAS and Connected Cars will be the centre of this shift and sales will grow faster for the time to come." He asserted that for electric cars there are two major players, India and China.

"Disruptions in technology and the business model will drive the automotive market," he remarked. "**EVs, MaaS and TaaS** will emerge as new business options. Mobility will have a systems revolution, efficiency revolution and time revolution. Future mobility," he believes, "will take an aerial route."

Asrulnizam Addrus, Addrus, Transportation Technology Division, Malaysian Investment Development Authority MIDA Explored Commercial Implementation of Autonomous Vehicles in Malaysia. He noted that the Malaysia's automotive industry is the third largest in ASEAN and contributes significantly to the country's income. "It has shown steady growth since 2011 despite challenging period. Why are Autonomous Vehicles needed? Road crashes cost Malaysia's economy RM9 billion a year. Before fully autonomous vehicles are a reality in Malaysia there is going to have to be a large improvement in the infrastructure."

"Are roads and infrastructure in Thailand ready? Are law and regulations ready? Are money and technologies ready? Are people and their behaviour ready?" In his presentation Autonomous Vehicles in Thailand Smart City – Will it Ever Come True?" **Dr Sakda Panwai**, Senior Vice-President, Don Muang Tollway, answered no to those question. Each one of those points will need to be addressed before Thailand can expect to see significant numbers of AVs on its roads. This despite the fact that Thailand is Southeast Asia's auto-making hub with several of the biggest OEMs having assembly plants there. **T**



Daimler Trucks Testing Platooning in Japan

Daimler Trucks has started tests on truck platooning in Japan, something it has been doing in other locations around the world.

After testing the electronic connection of trucks (truck platooning) in Europe and the US, Daimler Trucks now operates in so-called platoons with its Asian brand FUSO. During these tests, a heavy-duty FUSO Super Great operates electronically connected and semi-autonomous in a platoon with trucks of other Japanese commercial vehicle manufacturers.

These test drives took part between January 23 and February 1, 2018 on the Shin-Tomei Expressway southwest of Tokyo and on Kita-Kano Expressway, north of the Japanese capital.

Government Initiative

The Japanese ministry of economy, trade and industry (METI) and the ministry of land, infrastructure, transport and tourism (MLIT) initiated the platooning test. It is part of the Japanese government's Future Strategy 2017. This strategy aims to roll out innovations like the Internet of Things, big data and artificial intelligence across all industries. In the commercial vehicle sector, truck platooning will contribute to the reduction of fuel consumption and to lower CO2 emissions. In addition, truck platooning will help with Japan's dramatic driver shortage issue.

Martin Daum, Member of the Board of Management of Daimler AG, responsible for Trucks and Buses stated: "Two years ago, we demonstrated with Mercedes-Benz trucks in Europe that platooning can be done and is highly advantageous. Right now, we keep developing the technology with Freightliner on public roads in the US. Japan is a key market for us that is on the lookout and promotes

new technologies. We take part in the Japanese government's initiative to push platooning further ahead in Asia and to remain in the lead in the development of this technology."

Daimler Trucks leading autonomous, connected and electric driving

For years, Daimler Trucks has been doing pioneer work in autonomous, connected and electric driving with its truck brands Mercedes-Benz, Freightliner and FUSO. Throughout the globe, Daimler Trucks has now connected around 560,000 trucks to the Internet of Things – more than any other manufacturer.

For the digital connection of the FUSO Super Great during the platooning test, Daimler Trucks is combining the technological possibilities of connectivity with its experiences in the field of autonomous driving. Wi-Fi-based Vehicle-to-Vehicle communication (V2V) interacts with driver-assistance systems, which are also used in Daimler-brands Mercedes-Benz and Freightliner. Some of those are Cooperative Adaptive Cruise Control (CACC), Lane Departure Assist and Active Brake Assist 4 (ABA 4).

Future Truck 2025

In 2014, Daimler Trucks launched the truck-concept Mercedes-Benz Future Truck 2025 with autonomous driving function. Its designated aim was to develop the autonomous driving technology for series production until 2025. The following year, Daimler introduced "Highway Pilot" in Germany. In 2016, Daimler took part in the Dutch government's initiative European Truck Platooning Challenge with three electronically connected and semi-autonomous driving Mercedes-Benz Actros. The Freightliner Inspiration Truck has been driving in a so-called pairing-configuration (two electronically connected trucks) on public roads in Nevada and Oregon, since 2017. The FUSO Super Great is the first model of a Daimler-brand to drive in a platoon with other trucks in the key market Japan.

When it comes to platooning, the trucking industry in Japan is not only talking about technology, but also – like in Europe and the US – about regulatory issues. As a matter of fact: When the legal framework is set, Daimler Trucks customers will be able to operate their vehicles in platooning mode. **F**

NTU And Volvo to Jointly Develop Autonomous Electric Buses in Singapore

Nanyang Technological University, Singapore and Volvo Buses will begin testing autonomous electric passenger buses in Singapore in 2019.

“I am very happy and proud to be launching the Volvo – NTU Autonomous Bus Partnership research programme,” said Håkan Agnevall, President Volvo Buses on January 11, 2018 when Nanyang Technological University, Singapore and Volvo Buses signed an MOU to jointly test autonomous electric passenger buses in Singapore in 2019. “This is a research programme where we also partner with SMRT and ABB, the global supplier of electric vehicle charging infrastructure. We are going to learn a lot from this.”

A First for Volvo

This is Volvo’s first autonomous application in public transportation anywhere in the world. Volvo has already demonstrated its autonomous technology in mining, quarry and refuse collection operations. The 12m Volvo 7900 Electric bus is already in service around the world, providing a quiet and emission-free operation, and requiring 80 percent less energy than an equivalent sized diesel bus.

The 40-seater buses to be deployed in Singapore will be equipped with autonomous driving technologies. These include GPS and LIDAR laser technology systems for charting, positioning and detecting obstacles around the vehicle, and an integrated navigation system that includes automated steering, gear changing, and speed throttling technologies. The research will take place over four years and with 50 NTU students taking part.

Embracing Technology

“We have a vision to transform NTU into a smart campus that embraces technology to improve everyday life, and ensures the sustainability of resources,” said NTU President Professor Subra Suresh. “This partnership with Volvo on electric autonomous buses is part of the roadmap of the Smart Campus initiative. We hope that the solutions created out of this programme will contribute significantly to Singapore’s ambition of adopting autonomous vehicle technologies and enhancing public transportation.”

The buses will be tested from early 2019 at the Centre of Excellence for Testing and Research of Autonomous vehicles at NTU (CETRA). The autonomous vehicle test circuit, which is modelled after real road conditions in Singapore, provides a safe and controlled environment to test autonomous vehicles.



Living Lab

The NTU and Volvo partnership is also part of the collaboration between NTU and the Land Transport Authority (LTA) under the university’s living lab platform that was announced in October 2016. The living lab platform assesses technology maturity and road-worthiness, including the certification of the technologies for deployment on public roads.

The NTU-Volvo programme will be supported by SMRT and ABB, that will assess the vehicles’ roadworthiness

Comprehensive Research and Rigorous Testing

The autonomous electric buses will be tested on campus at CETRAN, which replicates different elements of Singapore's roads, with common traffic schemes, road infrastructure, and traffic rules. The circuit features a rain simulator and flood zone to test autonomous vehicles' navigation abilities under tropical weather conditions. It also helps improve overall safety and efficiency by allowing researchers to assess the vehicles' interaction with pedestrians.

"Our electric buses," noted the Volvo Buses President, "already make it possible for cities to improve their air quality and reduce noise levels. With our system approach to electromobility we, in addition, open up new ways for urban planning. When developing autonomous solutions for public transport we can really leverage the Volvo Group expertise in this rapidly developing technology field."

Charging Solutions


For the development and deployment of fast-charging stations based on the OppCharge interface, Volvo and NTU are partnering with ABB, a global leader in charging solutions for electric vehicles. The charging station can provide 300kW of charging power in three to six minutes, during the layover times at the bus route's end points.

"ABB has long been at the forefront of developing greener solutions," Tarak Mehta, President of ABB's Electrification Products division commented. "With this project, we reaffirm our intent to develop the Electric Vehicle industry in the Asia Pacific region. Our high-quality electric charging systems, combined with our cloud-based connected platform ABB Ability™, are paving the way for vehicles to become cleaner, more efficient and cost effective than ever before."

A New Milestone

Professor Lam Khin Yong, NTU's Vice President for Research, pointed out, "NTU fosters a culture of research excellence centred around translational research, accelerating ideas nurtured at the lab into practical and industry-relevant innovations for society. Our partnership with Volvo, a world leader in public transportation which explored hybrid and electromobility solutions as early as 2010, will set a new milestone in this era of disruption, automation and artificial intelligence."

Mr Agnevall pointed out the potential impact of electric buses. "Right now, the change is happening; cities around the world are shifting to electric bus systems. When we bring buses that are silent and emission free, we create a new mode of transport that will give us new opportunities for urban planning.

"We can take public transport much closer to people and we can take it indoors. In the future, we can have electric buses entering directly into shopping malls, hospitals and apartment buildings. Even if we develop autonomous electric cars, we will still not solve the problems of road congestion if we all travel individually in our autonomous eggs. To make the most efficient use of our streets we need to travel together into the future." 



and charging systems. SMRT will play a critical role in determining the roadworthiness of autonomous vehicles and assist in operational trials. One of the buses will undergo tests at a local bus depot managed by SMRT. This will test the vehicle's capabilities to autonomously navigate into vehicle washing bays and park safely at charging areas.

Future Ready

Mr Desmond Kuek, President and Group Chief Executive Officer, SMRT Corporation, noted, "Our goal is to stay future-ready with the latest urban mobility solutions to provide safe, efficient and comfortable journeys in Singapore's unique operational setting. This MOU paves the way for SMRT, working with our partners, to host operational trials for autonomous buses, and test out the Command & Control system required for operating such smart vehicles. Our engineers will be part of the joint effort to lead the proof of concept in Sweden, before moving the trials to Singapore. We will leverage on our extensive experience operating and maintaining buses to support the eventual deployment of autonomous vehicles safely on our roads in the future."

Mr Agnevall added: "We are seeing fast-growing interest in both autonomous and electric vehicles in cities all over the world. Together with NTU, one of the world's leading universities of technology, we now have the possibility of testing various solutions under realistic conditions in a major city that has high ambitions for its public transport."

New Solutions

"We consider Singapore and NTU as excellent partners for Volvo," he continued, "offering an enabling environment and complete ecosystem of research, development and implementation of new solutions. The technology developed in Singapore can contribute to future autonomous applications by Volvo Buses."

LTA's Chief Innovation and Technology Officer Mr Lam Wee Shann stated, "The Land Transport Authority fully supports innovation and cutting-edge technology that will ultimately benefit commuters. The agreement to develop and trial electric autonomous buses is a significant milestone in our journey to make this a reality in Singapore's public bus network."

Building a Yard Truck

Farezza Hanum Rashid took an exclusive tour of the Terberg Manufacturing and Assembly factory in Pasir Gudang, Johor to see the skills and hard labour put into the making of a Terberg truck.

Asian Trucker recently took a trip to Malaysia to visit Terberg Manufacturing and Assembly (TMA) in Pasir Gudang, Johor to learn more about the manufacturing process of the Terberg Tractors Malaysia (TTM) terminal tractor, also known as yard trucks. TMA also builds refuse trucks with bin lifts and is a contract manufacturer for Alexander Dennis bus chassis.

Cutting Technology

The layout of the TMA factory consists of a machine shop, fabrication shop, assembly shop, components warehouse and a material store. Trucks go through a series of preparations before they are introduced to the production line.

At the machine shop sheets of metal of various thicknesses are cut and bent. Metal sheets are cut in the traditional method as well as via laser cutting technology. The precision levels and edge quality achieved with laser cutting machines are better than traditional cutting methods as the laser beam will not wear during the laser cutting process. Laser cutting technology also enables cutting complex shapes without the need for tooling and at a similar or faster speed than other cutting methods.

Laser cutting also allows the cutting of small diameter holes with complex detail and good edge quality in either sheet, plate, tube or box section of metal.

Technical Cooperation

The cut-up pieces of metal then go to the fabrication shop for fitting and welding. Meanwhile, at the blasting and painting shop, the chassis will be blasted to clear the rust and create the required surface profile. After being painted according to the colour requested by the customer, the chassis is then towed into the production line and coupled with the moving line starting at Station 052.

The production line consists of two lines that face each other. On one side is the main line, where all five working stations are, and other side are six sub-assembly stations. Components are supplied from the sub-assembly stations to the main line. The production line stations in TMA are numbered 052, 056, 062, 072 and 076, similar to what is done in Terberg, Netherlands. This is to enable closer cooperation between the two countries from a technical perspective. If TMA faces problems at, for example, Station 056, they can consult with the Netherlands team by referring to that number.





At Station 052, these parts are assembled onto the chassis: The steering gear box, fuel tank, hydraulic reservoir, exhaust module, air tank assembly module, battery assembly module, air dryer and air cooler, cabin tilt cylinder and safety linkage.

Colour Coded

Station 056 is where hoses and wires are installed. Coloured air hoses are installed into the air compartment area while coloured wires are put into the Terberg chassis. Here, the wires and hoses must be laid on the floor first to clearly identify them before installation.

At Station 062, the Terberg chassis is mounted on a portable crane which is specially designed for axle installation. The parts mounted onto the chassis here are the mudguards, front suspension onto the front axle and the brake system with the coloured hoses onto the rear axle. Tyres are later mounted.

At Station 072, the engine cooling system, radiator and expansion tank are installed, along with the fifth wheel, and coupled with the transmission. At this point the chassis is ready. Meanwhile, at Station 076, the cabin sub-assembly area, accessories, heat shield, the dashboard, cabin bushes and seat are fitted into the cabin. Wiring, pneumatic and hydraulic hoses are then connected to the main component laid. The assembled truck is then taken to Quality Control for checks.



Quality Control

Activities at the Quality Control stage includes the Dimension Check where a 100 percent check is carried out on critical areas such as engine, axle, cabin and fixed wheels. Welding Inspection is a complete visual inspection and size measurement on welding for critical areas such as the cabin, engine and fixed wheel parts. Next is Painting Inspection where the painter does visual and wet inspections, and Dry Film Thickness (DFT) gauge checks on paint and thickness.

Still at the Quality Control stage, the routing hoses and wires are inspected by the assembler following the drawing specification. They then go to Programme Setting where they set the truck functions based on customer requirement such as speed limit, Anti-Lock Brakes (ABS) and LED head lamps.

Certification Achieved


Among the quality standards adopted include the MS-ISO 9001 since 1994 and Welders certification in accordance to the American Welding Society (AWS) from 1G to 6G requirements. There are also inspections by third parties like Lloyd's Register Quality Assurance and D N Quality Machining Ltd on case to case basis.

The entire process from customer order to delivery normally takes six months to complete. All the trucks built at TMA are custom-made and not stock, because different customers have different requirements, and each batch of order could have different requests. Therefore, the system needs to be accurate to avoid mix ups. The number of manpower at TMA is over 250.

Milestones

Last year TTM, a 50:50 joint venture between Sime Darby Industrial Sdn Bhd (SDI) and Terberg Group B.V., achieved a significant milestone with the production of its 3,000th yard truck at TMA. TTM acquired SDI's manufacturing arm, the TMA in 2013 and since then, has increased the facility's manufacturing capacity from four units per week to 16 units per week. The company aims to produce up to 4,000 units this year. TTM's yard trucks produced in Pasir Gudang are marketed to over 46 countries.

PSA Contract

Recently, TTM secured a "crown jewel" contract with Port of Singapore Authority (PSA) where it will supply the majority of PSA's fleet, which makes it the largest single order in the history for Terberg worldwide. PSA is renowned for its demand for stringent quality standards and after-sales support, and this contract reflects its trust in TTM and the Terberg brand. Terberg recently launched its first made in Malaysia autonomous yard truck which is the first in the world. 



Events & Exhibitions

THE 15TH CHINA INTERNATIONAL TIRE AND WHEEL FAIR

Date : 09 April 2018 – 11 April 2018
 Venue : Qingdao International Convention Center (QICC)
 Contact Info: 86 – 0532 – 555 7078 / lily.zhao@jinnoc.com
 Details : The China International Tyre and Rubber Fair (CTF) was started in 2004 with an aim to develop tire and rubber industries in China. Organized every year, it has attracted many companies from around the globe and significantly became one of the most successful trade fair in global tire industry chain. It welcomes the visitors to showcase and demonstrate their finished tire products, tire accessories & wheels and rubber processing equipment. At CTF, buyers and suppliers from China and other countries gather under one roof.

TAIWAN INTERNATIONAL ELECTRIC VEHICLE SHOW

Date : 12 April 2018 – 15 April 2018
 Venue : TWTC Exhibition Hall 1
 Contact Info: 886 –2 – 2725 – 5200 / evtaiwan@taitra.org.tw
 Details : In 2018, EV Taiwan joins all the strengths of domestic manufacturers showcasing their latest products and EV technologies for the emerging electric vehicle industry. Taiwan has accumulated a vast pool of experience, knowledge and advantages from its highly developed ICT (Information Communications Technology) which it is bringing to the race to create green technologies. In addition, Taiwan's well-established EV industry chain ensures that EV Taiwan is the place to go to source high C/P Taiwan-made complete EVs, components and infrastructure.

COMEX

Date : 23 April 2018 – 28 April 2018
 Venue : Oman Convention & Exhibition Centre, Muscat
 Contact Info: +968 9934 1687 / barnes@oite.com
 Details : The private sector's role in aiding this transformation will be highlighted with a special focus on corporate solutions relating to Augmented & Virtual Reality, Smart Cities, Cybersecurity, 3D Printing, Big Data, Cloud Data Centres and Artificial Intelligence. Correspondingly, the public sector's role in creating the regulatory framework and both corporate and citizen based services through secure connectivity, as outlined in the Information Technology Authority's digital strategy, will be also be showcased in a dedicated government area-Comex E-Oman.

21ST AUTOEXPO AFRICA 2018

Date : 17 May 2018 – 19 May 2018
 Venue : KICC, Nairobi
 Contact Info: +91 – 4 – 3721421 / feedback@expogr.com
 Details : For 20 years, AUTOEXPO Africa has been chosen by global manufacturers and exporters as the precise platform to enter the market of the millennium Africa. Celebrating its 21st anniversary, the leading trade exhibition for automobile, truck and bus parts, equipment, components, accessories, tools and services continues to ring world leading manufacturers, suppliers and service providers in touch with one of the most important markets in the world.

SMART CITIES INDIA 2018

Date : 23 May 2018 – 25 May 2018
 Venue : Pragati Maidan, New Delhi
 Contact Info: +91 – 11 – 4279 5033 / aruns@eigroup.in
 Details : Key elements of 4th Smart Cities India 2018 Expo:

- Smart Water & Waste Management
- Smart Environment
- Smart Urban Planning
- Smart Buildings
- Smart IT & Communications
- Smart Security & Safety
- Smart Grid
- Clean Energy
- Government Initiatives

GUANGZHOU INTERNATIONAL BRAND FORKLIFT & ACCESSORY EXHIBITION BFE GUANGZHOU

Date : 24 May 2018 – 26 May 2018
 Venue : China Import & Export Fair Pazhou Complex
 Contact Info: +86 (0)20 34040903 / bestguangzhou@vip.163.com
 Details : Guangzhou International Brand Forklift & Accessory Exhibition is an international trade fair for forklifts and accessories. Many international exhibitors from countries such as China, Japan, Korea, Canada, Germany, Australia and the United States show the latest forklift trucks, equipment and other technology for the transportation sector. It is an excellent opportunity to view the latest products on the market or to establish new business contacts.

For more info and events, head over to <http://asianbuses.com/newsevents/calendar>





CAPAS 2018 Optimises Product Offerings to Facilitate Southwest China's Aftermarket Transformation

New products emerge to meet the region's growing environmental policies

As a leading platform for the automotive industry in Southwest China, the Chengdu International Trade Fair for Automotive Parts and Aftermarket Services (CAPAS) continues to align the region's automotive industry with the country's development strategies. The coming edition will be held from 24 – 26 May 2018 at the Chengdu Century City New International Exhibition & Convention Center, China. The fair is expected to house around 580 exhibitors across 45,000 sqm of exhibition space and welcome 20,000 visitors.

The political and economic influence of the Yangtze River economic belt, together with the Maritime Silk Road, plays an important role in China's National Development Strategy. Benefiting from these geographical and industrial advantages are key automotive cities in the Southwest region, including Chengdu and Chongqing. This allows their markets to continually evolve and develop, particularly within the automotive industry. For example, according to the Traffic Management Bureau of the Public Security Ministry, Chengdu and Chongqing recorded 4.29 million and 3.5 million car owners in the first half of 2017, the second and third highest in China respectively.

What's more, the global drive towards more environmentally friendly policies, new energy vehicles, and intelligent manufacturing is gradually filtering into many Chinese markets. Subsequently, manufacturers, distribution channels, and end-users are now facing the challenge of a sustainable transformation, in a bid to compete with the rest of the world. As such, the upcoming edition of CAPAS 2018 will not only be home to the region's key players looking to capitalise on its geographical prospects, but also to those driving the change for a greener industry.

Mr Shunfeng Li, Vice President of Chengdu Auto Parts Trade Association, believes the show will allow industry professionals to reach out to better products, technologies and business philosophies. He said: "Since the government is promoting more environmental protection these days, various service centres, repair shops, tyre shops and logistic companies in the Sichuan region are undergoing significant reform. We expect to see higher quality products, thanks to the improvement in manufacturing and distribution channels."

New products emerge to meet the region's growing environmental policies

In line with the Planning for the Development of the Energy-Saving and New Energy Automobile Industry (2012 – 2020), the average annual fuel consumption for passenger vehicles in China will reportedly decline to just 5 litres per 100 kilometres by 2020. In response to this, the quality of motor oil will also have to increase tremendously which will certainly affect the product structure of this market. In terms of the Southwest region, the current oil market mostly focuses on middle and lower-end products. Despite this, with the government's increased emphasis on eco-friendly policies and improved product offerings, many renowned lubricant oil suppliers see great potential in developing the market in the Southwest region.

One such supplier is Liqui Moly, who will be exhibiting at CAPAS 2018. Mr Suhuai Gao, Marketing Planning Manager of Du-hope International Group, the exclusive agent of Liqui Moly in China, said: "Though rapid economic growth, the Southwest region in China is still at a developing stage in the eyes of high-end brands. We have always been pursuing high quality and performance in all of our products, including our motor oil series that can save fuel and reduce pollution. We have been exhibiting at CAPAS since the first edition and this year we want new business partners who are seeking high quality products."

Meanwhile, Shandong Yihe Lubricant Oil Co Ltd will make its debut at CAPAS 2018. Ms Huili Wang, Marketing Manager of the company, commented: "Our products have received various awards such as China's High-Quality Brand-Name Products and China's Green Environmental Protection and Energy Saving Products. We will bring a newly developed series of lubricant oils to the fair this year, and we are very optimistic about the benefits that CAPAS will bring to us. Through our presence, we would like to know more about the market in the Southwest region, and build on our influence there."

SDZ Auto Parts Co Ltd also notes the importance of energy saving initiatives in the region. The company specialises in a wide range of products, including fuel, oil coolers and electrical systems, and also owns a market share of 33% in the distribution channel of same product group.

Mr Haibo Chi, Chairman of the company, said: "At the 2018 show, we will launch our thermostat assembly catering specifically to the Southwest market, which meets Euro 5 emission standards. For us, CAPAS is a comprehensive platform for industry stakeholders to step into this potential market, and we expect to increase our reputation in the Southwest region by exhibiting at the fair."

Elsewhere during the course of the show, CAPAS 2018 will continue to present six theme zones to provide a better business matching platform for both exhibitors and visitors. These are:

Supply Chain Procurement Zone, Quick Fix Zone, Replacement Parts & Chain Stores Zone, Automobile Lifestyle Zone, Made in Sichuan Zone, Commercial Vehicle Zone, and E-mobility & Infrastructure Zone.

One of the most anticipated aspects is the Commercial Vehicle Zone. Ms Yolanda Huang, Director of Aftermarket Trailer CVS China, Knorr-Bremse Commercial Vehicles Systems (Shanghai) Co Ltd, said: "The Southwest region has a great demand for high-end commercial vehicle systems, so we set up a factory in Chongqing to improve the technology standard in the market, and to better implement environmental and new energy policies in the region. CAPAS is an influential industry event with a renowned Commercial Vehicle Zone. This helps us to get in touch with our potential customers much easier, and boosts our brand awareness."

Ms Fiona Chiew, Deputy General Manager of Messe Frankfurt (Shanghai) Co Ltd, also added her thoughts ahead of the show: "CAPAS has been upgrading itself with an enhanced product offering and a wider scope of products for both exhibitors and visitors. In 2017, the annual sales growth of vehicles in the Southwest region stood at 9.9% compared to the previous year, which is the fastest in the nation. With car ownership increasing rapidly, it helps to create unrivalled business opportunity in the market. The extensive global resources and unique advantages of CAPAS offer greater ideas and higher quality products. Under the government's 'go green' policies and with the increasing demand on data usage and business efficiency in the region's aftermarket, we will further enhance our range of conferences, seminars, and training sessions, to present a more advanced and cutting-edge industry through CAPAS 2018."

CAPAS is jointly organised by the China Council for the Promotion of International Trade, the Automotive Sub-Council (CCPIT-Auto), Messe Frankfurt (Shanghai) Co Ltd and the China Council for the Promotion of International Trade (CCPIT-Sichuan).^F





Mark Cameron Bids Adieu to Singapore

After five years at Scania Singapore, Country Manager Mark Cameron decided to return to his home country and he was bid a fond farewell at a customer appreciation dinner.



Acknowledging the importance of their customers Scania holds events to show their appreciation to them. On Friday 15 December 2017 the 'Scania Appreciation Dinner 2017' was held not only to thank customers and business partners in Singapore for their on-going support, but to say adieu to Mark Cameron, Country Manager of Scania Singapore and Regional Director of Scania South Malaysia and Singapore. After five years in his position in Singapore Mark had decided to return to Australia, for family reasons.

Achievements Noted

The evening began at 6:30pm at the Azalea room, Shangri-La Hotel, Singapore where about 100 guests gathered for cocktails before the dinner was served.

In bidding farewell to Mark, the evening's speakers acknowledged his leadership and achievements in Singapore. Scania's market leadership was highlighted as the company was among the first to introduce Euro 5 and Euro 6 engines to Singapore. Under Mark's leadership, the company opened the Benoi Service Centre as a satellite workshop to better support customers situated in the western part of Singapore.


During Mark's five-year tenure there was the introduction of Scania Marcopolo coach, a complete coach solution including body, which has proven popular with long time Scania customers, and the introduction of Scania Fleet Management Service.

Community Collaborations

Community involvement was a priority of Mark's that resulted in the collaboration and partnership with ITE College to train next-generation service technicians. Business hours were extended, and continuous service improvements were introduced to support customer needs.

Staff development was an important issue for Mark and he pushed involvement in the Top Team competitions. In 2014-2015 he led the service technicians all the way to Top Team World Finals that were held in Södertälje, Sweden. Top Team Singapore 2017-2018 saw Team Dynamics represent Singapore in the Regional finals in 2018, with the hope that they will again be able to go all the way to the World Finals in Sweden. He also encouraged participation in the Scania Driver Competitions in 2014-2015 and in 2016-2017.

whom it has been my profound pleasure and honour to work with and all those that could not be here tonight, I say, so long, thank you. I hope to see you at some time in the future."

Mark's contribution was not just to the business side of life, but he became a respected friend who left a warm impression on all those he met. 



Truck Platooning

A significant achievement was the clinching of the tender to participate in Phase 1 of the Semi-Autonomous Truck Platooning Trial with Ministry of Transport and PSA Corporation. An accomplishment that will have impacts long after Mark has gone to his new home as the trials continue and Scania is in the forefront of this technology.

"In the past five years in Singapore," Mr Cameron told the guests, "the industry was on the rise and you, customers and business partners, were part of the rise. We are very happy that you have given Scania an opportunity to grow together."

Meeting the Challenges

Marie Sjödin Enström, Managing Director of Scania Southeast Asia, in addition to noting Mark's accomplishments during his five years also focused on the Singapore customers.

"You are all contributors to the country's expansion in these two areas," Ms Enström continued, "and we at Scania believe that through our continuous partnership with all of you, we are not only able to provide you sustainable transport solutions that benefit the country, but we are also supporting you, driving your business to sustainable profit."

"Over the past five years, we have developed a great team under the leadership of Mark and for this, I would like to express my gratitude. Mark and the team have always done their outmost to serve and take care of our customers including welcoming new customers."

A Family Feel

Colleagues who worked under Mark, Victor Ong, Sales Manager, Trucks, Scania Singapore, and Aron Lai, Product Sales Executive, Bus, Scania Singapore talked about how much they enjoyed working with Mark and the respect they had for him. They both agreed that the atmosphere was like a family feeling. "Working together was more like a family than like colleagues," Aron stated.

A Final Toast

Mark wrapped up the evening by offering a toast to all those friends and colleagues he would soon be leaving. "So, to all the people with





Goldbell Grows with New Technology

Floyd Cowan sat down with Mr Alex Chua is the Chief Operating Officer of Goldbell Group who outlined recent activities of the Singapore conglomerate that does far more than lease commercial vehicles.

When I was introduced to Mr Alex Chua, Chief Operating Officer of Goldbell Group I was impressed with his energy. Being responsible for business growth and the performance of Group Leasing, Aftersales, Business Intelligence, Information Technology and Financial Services sections divisions he would certainly need a lot of energy to keep up with the job. But he does more than just 'keep up' but is driving the company forward on many fronts.

Vision & Strategy

Drawing on his extensive corporate finance and regional experience to address the challenges of a fast-changing, ever-





evolving business landscape, Alex translated his vision and strategy into a forward-thinking execution by revolutionising Goldbell's technology infrastructure to integrate and streamline the group's business operations.

Prior to joining Goldbell, Alex worked at JP Morgan as Head of Equity Derivatives Retail Structured Products Distribution S.E.A from 2005 to 2012. He is an avid Brazilian Jujitsu practitioner, a foodie and traveller. As he rarely says no to gourmet experiences, I asked him about Singapore's food scene and he told me about a new steak house I hadn't heard of.

Early Days

Goldbell was established in Singapore in 1980 by Mr Chua Geok Eng, Chairman of Goldbell Group (Goldbell), along with his father, the late Mr Chua Kim Cheng B.B.M.(L). "We started with fork lifts

and moved into trucks, and that's what we became known for," Alex explained. "But then we evolved from being the exclusive distributor for Komatsu forklifts to become a leading name in commercial vehicles and industrial equipment distribution and leasing."

Goldbell now has a staff of 860, out of which 63% are dedicated to aftersales service, including a team of highly qualified repair technicians and engineers. A driving force behind Singapore's growing economy, Goldbell has been providing industrywide transport and logistic solutions for passenger and commercial vehicles, as well as material handling and aviation ground support vehicles and equipment, for nearly four decades. Alex has no intention at stopping here and plans to further diversify the business.

Alex has proven himself since he joined the company. His decision to combine Goldbell's leasing entities under Goldbell Corporation delivered a turnover of S\$195.8 million in the financial year ending March 2017.

Three Pillars

Goldbell's business portfolio operates under three main pillars: Distribution, Leasing, and Financial Services. They are adding new businesses that is taking the company into new areas.

"Goldbell has one of the largest combined fleet sizes of industrial leasing vehicles in Singapore," Alex points out. "The company provides vehicles for the construction industry, manufacturing, logistics and transport and even aviation. This translates into about 5,800 commercial vehicles, 1,100 passenger vehicles, 1,900 forklifts and 126 units of aviation ground support equipment. Goldbell also carries a range of specialised vehicles including ambulances, waste-handling vehicles such as rear-end loaders and vacuum tankers, recovery vehicles and car carriers

Delivering Quality

At the heart of Goldbell's business is its unwavering commitment to delivering the highest quality of service excellence and aftersales support as part of its Goldbell Care promise. This includes onsite equipment servicing, 24-hour breakdown service, extensive maintenance and sales programmes and a comprehensive range of parts that cater to both current and older models of vehicles and equipment. Goldbell has a 95% parts availability commitment for active-line items. "Owning so many vehicles, it only made sense to have a workshop that would put our needs first and where we could control the quality. It had to be first rate."

The company has invested close to \$75 million in reinforcing its aftersales services and parts division, which include plans to open an automated, multi-storey flagship facility by 2019. This will bring together its workshop and after-care services under one roof in three hectares of land. Goldbell represents renowned international brands and has 21% of the market share amongst the 3.5T light duty to heavy duty Japanese trucks with an average of 2,500 units in yearly sales for new industrial vehicles.

Financial Services

What also made sense was for Goldbell to establish its own financial services. "SMEs are not well covered in Singapore," Alex states. "Banks have too many requirements that make it difficult for small businesses to get the financing they need. Many of them have been our customers for a long time, they know us, and we know them. We started as an SME, so we understand the ethos."

Goldbell Financial Services, set up in 2015, offers hire purchase of vehicles and equipment, factoring, working capital loans, inventory financing, commercial property loans and renovation loans. "We also offer fleet management. We make sure the LTA's road tax are paid on time. Fines



are a big problem with fleets. In Singapore a trucker can be fined by five organizations and they are billed in different ways. If administration misses it, for whatever reason, the next fine is double the original, then triple. Our service manages this, so the first fine is paid, and no additional money is lost."

Accident Reporting

Accidents and their repercussions can also be better managed than most companies handle them. "Accidents are a big operating cost. If the reporting of an accident is left to others, then costs grow. We make sure an accident is settled on the spot, so it doesn't get elevated. Once it goes up the chain the costs go up. Many owners don't realize what they are losing. When you don't know how much money you are losing you don't know how much can be saved. By putting a proper financial system in we can save companies money. Most companies manage their finances on an ad hoc basis. They need a proper system. We can provide these systems for companies whether or not they lease from us."

Alex says Goldbell operates to strict and high-quality standards across all its internal systems procedures, and practices. This is reflected in achievement of ISO 9001:2015 Quality Management System, the S5506 Singapore Standard on Occupational Safety and Health Management System and OHSAS 18001:2007 International Standard on Occupational Health and Safety Management System.

Mobileye

Keeping abreast of new and innovative programmes that can be used in the trucking industry is an important part of the job. "Most accidents are caused by human error," he

explains. "Mobileye is a programme that tracks how well the driver drives. It gives warnings to prevent accidents and it can make a person a better driver. Mobileye is the global leader in the development of vision technology for Advanced Driver Assistance Systems (ADAS) and autonomous driving, and their products are moving the industry towards autonomous driving.

"Fully autonomous driving is still a long way off," is Alex's view. "For city driving, which has to deal with so many factors, and will require a lot of infrastructure, it will take some time to get there."

Pitstop

Looking outside of Singapore, and into the future, Goldbell is investing in IT products and new start-ups. Pitstop is one such business Goldbell has invested in. "In some countries, such as India, there are many small workshops. Customers don't know the quality of the parts and service they are getting. They don't know if shops are accredited or if they are getting real or fake parts. Pitstop puts everything on a platform and provides a one stop solution for all car care needs using a network of partner garages. Pitstop standardizes service workshops, enabling the small workshops to provide a higher standard of service by using technology, data analytics, and modern business practices."

A Pitstop team will come to you, inspect your car, and give you a detailed quote for the service, including pictures and descriptions to explain why a repair is needed. General servicing, brake overhaul, wiper replacement, and such regular wear-and-tear issues can be done at your doorstep.

“What the Pitstop founders have done is to use technology to create a new business. This is the whole point of e-commerce,” Alex points out, “to be your own business owner.” There are plans to expand Pitstop into other countries such as Indonesia, Thailand, Malaysia and Vietnam, but not Singapore. “There is no need for it in Singapore as the workshops here are very good. You won’t find any fake parts and the work standards are very good.”

Waycare

Goldbell looked to Israel for another investment, which has been implemented in Las Vegas. “Waycare has brought down the number of accidents in Las Vegas by predicting where it is highly probable that they will occur.” This is done through Waycare’s cloud-based platform that enables cities to take full control of their roads by harnessing in-vehicle information and municipal traffic data for predictive insights and analysis, and proactive traffic management.

“Waycare looks at factors that contribute to accidents, such as heavy traffic and slippery conditions, and alerts authorities and first responders who can take action,” Alex explains. The enormous amount of data coming from various transportation modes, including connected and autonomous vehicles, improves traffic safety and proactively manages the city’s roads.

Chakratec

Another innovative company that Alex is excited about is Chakratec that provides Unlimited Smart Storage for Electric Vehicle Charging Stations. “The technology employed by Chakratec enables charging by using power from the grid; however, as many cities do not have high power grids to support fast charging for electric vehicles, Chakratec uses a kinetic booster to amplify the power taken from the low power grid to support fast charging.”

Goldbell is developing a working model that will be used in its workshops. “We will test it for six months before we further expand its use.”

UVeye

UVeye is one of those technologies that was developed for a particular use and then has expanded into other purposes. “UVeye was developed to detect and identify anomalies, modifications or foreign objects in the undercarriage of any vehicle. All Lexus should look the same. It was used for bomb detection, but as it can detect when there is something amiss it became a great tool for preventative maintenance. If there is a screw loose or something is out of place you diagnose the vehicle and prevent further damage or an accident from happening.”



UVeye provides a 3D scan of the vehicle that captures all angles and details giving a vivid 360° view of the vehicle. Its cloud-based architecture enables centralized management and provides a big-data platform for data-driven analytics.

SWAT

Singapore start-up Ministry of Movement has co-created SWAT with Goldbell, a technology that serves the growing demand for a taxi ride-sharing service in the era of the shared economy. SWAT enables riders to get to their destinations comfortably and affordably by utilising a real-time, data-powered approach that calculates optimal routing. It puts into place a more efficient and cost effective public transport infrastructure by supporting municipalities and communities with a running system of shared vehicles that have “speed like taxi, price like bus”.

A true testament to Goldbell’s belief in the potential of SWAT is the industry interest it has generated and the fact that SWAT was awarded the contract by the Land Transport Authority (LTA), to develop a “dynamic matching and routing algorithm” for LTA’s first trial phase of on-demand public bus services.

In House Testing

“We have the largest fleet in Singapore, so we can test products in real work situations. We can not only improve our operations, but we can improve the operations of any company, regardless of its size.”

Goldbell has been growing its regional footprint with operations in Malaysia and Vietnam that contribute 10% to company revenue. Australia is its latest addition as it has invested in Bell Fleet Management. Both companies have invested significant amounts of capital and expertise into the fleet leasing and management operations. Bell Fleet was the first fleet management company in Australia and New Zealand to expand the paradigm of ‘fleet management’ to include capital items other than just passenger and commercial vehicles into its product suite.

Goldbell continues to expand its footprint, utilising its historic strengths while keeping pace with a rapidly changing world to move into exciting new business areas. **F**

140 Years of Heritage, Innovation and Growth for Steelbro

The year 2018 marks a significant milestone for Steelbro as the New Zealand sidelifter specialist proudly celebrates its 140 year anniversary.



The story began in 1878, when brothers Joseph and David Steel set up the Steel Bros. Coach Factory in Christchurch, New Zealand. By the 1930s, the company was designing and building motor bodies and by the 1960s it had become New Zealand's leading motor body building and engineering company.

Steel Bros. was building truck bodies and assembling an increasing range of Toyota cars by the 1970s and even built the famous Lotus sports car. The 1980s saw the wind down of its vehicle assembly and motor body building business.

Steelbro, as the Company was now known, decided to concentrate on developing the concept of container transportation – and the revolutionary sidelifter was born. In the same decade, Steelbro became a dominant force in the global commercial transport industry.

In 2015 Steelbro was acquired by West Australian based Howard Porter PTY Ltd. Like Steelbro, Howard Porter is a family based pioneering coachbuilder who today manufactures transport equipment. Under this ownership, Steelbro has continued to grow. An expanding network of distributors, sales offices and service agents span the globe and provide local support for the sidelifter product.

“Our head office and design centre are still in New Zealand – but we’re internationally focused and always looking for opportunities”, says Steelbro’s Giulio Lombardi. “It’s important to be innovative and search for new avenues for growth.”

Steelbro experiences significant growth in Malaysia

Owner, Howard Porter is committed to growing the brand and helping support the development of its Malaysia operation. The last few years

have seen continual investment to help strengthen Steelbro’s market presence and ensure it continues to enjoy a strong presence in the country.

Malaysia was in fact one of Steelbro’s earliest overseas markets. When the sidelifter was first developed in the 1980s, Malaysian transport operators were among the first to recognise its benefits. They quickly realised that being able to ‘stuff’ and ‘de-stuff’ their containers on the ground, rather than on the back of a trailer would save them valuable time and improve efficiencies.

Steelbro had over forty sidelifters operating in the country when in 1996 the Malaysia operation began in Kuala Lumpur. Being a large port area, Kuala Lumpur would provide huge market opportunities and was destined to become a success for the company.

Initiatives to improve lead times and product delivery processes are helping to improve customer



over 20 years. The company operates five Steelbro sidelifers to lift and transport 20', 40' containers as well as ISO tanks on short journeys and within their yard. The fleet includes two second hand and three brand-new SB450 heavy duty sidelifers. Nespalm group owns 30 container prime movers with 170 trailers mixture of 20ft and 40ft and 25 units of Palm Oil tankers.

"We use the sidelifers for shunting and staging in our own yard", says Director Mr Tony Sarawan. "The sidelifers have helped us immensely by supporting trailer operations, and helping us increase the number of containers moved. We've experienced growth and increased revenue. Being able to transfer from sidelifter to trailer and trailer to trailer has really helped us speed up the operation.

"We chose Steelbro because it seemed to have better lifting capability and better features than competitor products. It's a good product brand, with a long life. It's also very reliable and feels safe to use.

"One of our second hand sidelifers is now more than 10 Years old. It's because of the durability and reliability of that one, that we decided to choose Steelbro when we decided to buy a new sidelifter." **T**



satisfaction. Lead times have been cut by 50% and sidelifter units are also being held in stock to feed the increasing demand.

Other initiatives in Malaysia, according to Steelbro, are the 24 hour/7 day service and support operating out of their wholly owned service facility. Among the improved resource and capabilities introduced are new fully equipped service support vehicles, highly skilled, trained technicians and expanding regional support network.

Second hand units are being successfully refurbished at the service operation and recently a refurbished unit was exported to Guam.

Service and maintenance packages to help optimise efficiency, reliability and sidelifter resale value can be tailored to each customer.

Palm oil exporter successfully operates five Steelbro sidelifers

One local operator who can attribute some of their growth to the Steelbro sidelifter is Nespalm Logistics (M) Sdn Bhd, (A Member of Nespalm Group of companies). Nespalm has been exporting palm acid oil in bulk quantities and in drums from Malaysia for



eziparts Redefines the Automotive Parts Industry

Great thought and extensive development went into eziparts to ensure it would meet the needs of the complex parts industry in the most user-friendly way possible.



Bringing together his experience with the spare parts industry and his ability with computers, Richard Delahoy has created eziparts, a feature rich ERP system combining a fully integrated website, and can be used for truck parts, car parts, motorcycles marine or any type of part you wish to sell.

Showing the World

“By far,” says Richard, “one of the most powerful features of eziparts is the ability to totally expose your stock to the world. “Recently, a client in Australia sold a Land Cruiser body shell to someone in Canada. Before this technology, that would have been near impossible.”

Although Richard, the company founder, from Melbourne Australia, began developing the programme in 2000, and was neither first to the market nor the biggest player in the game, he may be the most successful. “Having been involved in the spare parts industry I knew that any IT programme for this industry would have to have several features to be successful,” he explains.

Keeping it Simple

Richard’s first priority was to make it simple. “People in this industry are not highly computer literate. If the programme is too complicated, they won’t use it. This has nearly done in some parts companies because they invested money into a product that didn’t bring them any new business. Some would just stop using it. Ours is very easy to use and it is about

one third the cost of other similar programmes.” It is a very intuitive system which allows the user to readily access any feature.

Quality photos are crucial to the success of eziparts. Buyers need to see a high-quality picture of the part they are interested in buying. To ensure this happens there is a feature that shows the proper angle to take the picture from. Even the most photographically unskilled person can see what needs to be done and get a useful picture.

Super-Fast

Another high priority was to make it fast. “This programme is super-fast. Much faster than our competitors,” Richard states. This is important as when a potential customer is looking for a part he is checking all possible sources. The one that responds first is mostly likely to make the sale.

The customer’s online experience is extremely important, web sites must be easy to use, with page and search response times kept to a minimum, a key competitive advantage over your competitors.

The eziparts solution is distributed and supported by Software Gurus Pty Ltd. Software Gurus is an experienced communications team specialising in the provision of online business tools including website development and marketing solutions. The eziparts system has been developed especially for the auto parts industry and would currently be ranked as one of the most advanced systems in the world for the industry.

Inventory Management

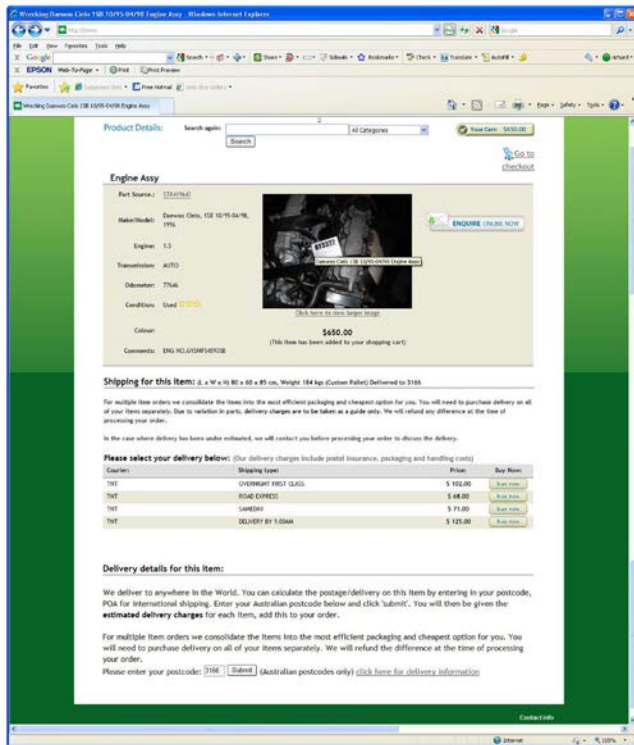
Inventory Management is the most extensive and exciting feature of eziparts. Auto parts inventory systems involve greater complexity than any other form of warehouse inventory. The variations to any one part and how this may link to other similar automotive parts is well beyond the bounds of traditional inventory systems. Eziparts can also handle used parts where no part number is known or even exists. It has the versatility to be used by new parts suppliers, traditional used parts dismantlers or Pick-a-Part style businesses.

Key features of the eziparts inventory include multiple part types; ie new genuine, used, reconditioned or aftermarket. It can identify multiple part numbers per part, OEM, user defined, and multiple reproduction manufactures numbering, parts interchange, plus it can do third party interchange cross-referencing.

Photo Capacity

Crucially, it can store multiple images of vehicles and parts plus a generic parts image library. “The photos are what makes this system work so well. If you go to other websites you will see the tag, ‘Call for more information’. With eziparts you get all the information, along with photos, so you know exactly the quality and condition of the part you want to buy. There is no need to call for more information. You can decide right then and there if you want to buy.”

“The photo mobile app allows you to put notes on the photos and it can scan bar codes,” he explains. “You can go out into the yard and take up to 200 pictures or more before

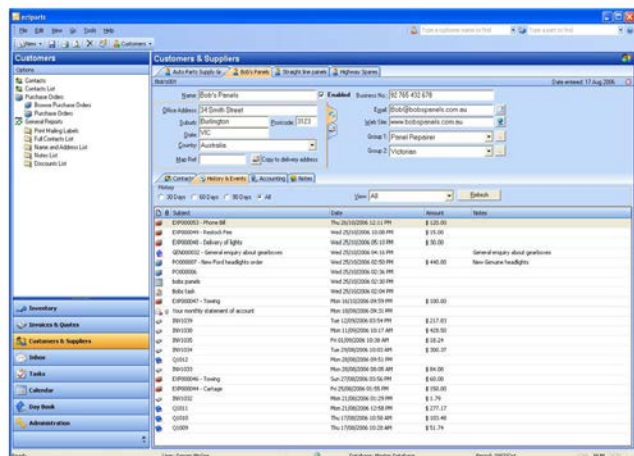


you have to upload them. That saves you time. You can do all that work offline and then go back into the office where you have connectivity and upload the pictures."

Expanding Customer Base

"There are still people who believe that the used part business is declining. They weren't getting customers. Nobody was walking in. Business was dying. We have turned businesses around. Instead of losing money, they are making it. They are back to the heydays. Another reason the programme has enabled this is because traditionally customers came within a roughly five-mile radius of the business. That radius has expanded to 20 miles, effectively quadrupling the customer base. And really, for any part, online orders could come from anywhere in the world."

eziparts has created an online auto parts trading community whereby businesses and customers can seamlessly search and purchase parts from dealers around the world. Customers can join your website so you learn what they are looking for.



"When a customer is looking for a part he can search the parts dealer's entire stock," Richard points out. "Before, the parts were hidden in a warehouse, down a dark aisle. Now they are on view for the entire world to see."

Business Management

eziparts delivers total business management of all business processes from vehicle purchase, dismantling, sales through to vehicle disposal and full website integration. Everything is automated, with offsite system backups, programme updates, website management of inventory and sales, automated freight calculator, and automated predefined email responses.

"Not only do you have all the information about the parts you have available for sale on your devices, but every 20 minutes everything is backed up to the Cloud. If your system should crash entirely you still have everything available in the Cloud except for what you had done for the past 20 minutes, or less."

Business Integration

Being that everything is in the Cloud it makes possible total business to business integration. "You can search another business's inventory with control permissions between businesses," Richard explains.

Another benefit of this system is the standardisation of vehicle models and part information, including multiple part numbers per part, interchange and vehicle information including VIN and lens number identification. You will find what you are looking for because everyone is using the same terms.

Government Compliant

In addition to having full customer CRM and accounting debtors' management, it complies with governance for the industry. eziparts has parts and sales tracking of vehicles and parts back to origin, NSW and New Zealand prescribed parts register compliance, sales statistics and trends. It has multiple price lists per vehicle make and model, along with new, reconditioned, aftermarket and used part pricing.

Indeed, the programme is much more than a catalogue for your parts inventory. It has features that every business needs. Email integration for emailing invoices, purchase orders, monthly statements, part images or bulk mail outs and the recording of email history against customer records are more eziparts features. Add these: Employee task management, team calendar and day book enquiries.

Office Applications

eziparts has very comprehensive customer management features such as quick searches by any customer field such as name, address, phone number, etc, and it will support multiple contacts per business. Knowing your customer's history is important and eziparts develops that, including invoicing, quotes, expenses, tasks, events/reminders, email correspondence, vehicle purchasing and purchase orders.

Important for all businesses is debtor account management, 14 days, 30 days, cash only, whatever. It is user definable and easy to use. eziparts advanced sales and invoicing system makes selling parts a fast and streamlined process. It allows you to submit quotation for parts and flag parts reserved for a customer until a certain date. It can convert quotes to invoices, print or email the invoice to the customer and do much more. **➔**



i Vision Developing Smart Solutions for Bus & Trucks

Singapore company, i Vision, is an innovator of smart solutions that are helping fleet owners bring older vehicles into the 21st century.

Customised Solutions

i Vision has provides customized solutions for their customers. "We work with a security company that transfers cash for their clients. They needed a solution that they couldn't get off the shelf. By working with them and understanding their needs we were able to provide them with a customized solution that met their requirements."

i Vision began in Singapore and now has customers in Malaysia and Myanmar. "We are also looking at Vietnam, Cambodia and the Philippines as possible markets to enter."

Singapore Smart

i Vision's work in On-board diagnostics (OBD 2) allows them to do more with integrating various levels of technology. With a fleet that is made up of vehicles of various ages, i Vision can harmonize the systems so they are all able to communicate and provide the growing amount of data to the owners, so that the whole system becomes Smarter. The older vehicles can talk to the newer vehicles.

Sebastian points out that the company's main focus is Singapore. "This is where most of our customers are. We are also onboard with the Singapore government's efforts to make Singapore a Smart City. We are able to contribute to the integration of technology and assist in Smart nation building."

i Vision continues to innovate and developed and so not only keeps up with rapidly improving products and technology, but contribute to the growth of this industry. **F**

The automotive world is in a state of transition with new technologies emerging daily as the industry strives to make vehicles smarter and totally autonomous. Fleets of commercial vehicles and buses are various ages and companies have different requirements so there is no 'one solution fits all.' This is why i Vision, a Singapore company, is an important player in this field. With their inhouse engineers for both software and hardware, they are customizing products to meet the individual needs of clients.

Entertaining Systems

"Established in 2003," Managing Director Sebastian Peck explains, "i Vision began by making Media-On-Demand entertainment systems for buses and coaches. We grew from this to specialise in intelligent real-time fleet management and vehicle monitoring solutions. We have developed into an innovative and visionary technology focused company."

i Vision 's services include consulting, supply, installation, system integration, testing and commissioning. "We have focused on expanding our distribution networks, as well as providing partners and customers with new, innovative products and system solution. Our team of software and hardware engineers keep abreast of technology and market trends. They are testing and developing our own technology and products that we can use to provide customised solutions for our customers."

Vehicles Tracking Video Management Systems

One solution that i Vision has integrated is a vehicle tracking system. "It tracks what is happening with the truck. Is the driver speeding? Does it need an oil change? The system generates reports that can be read in the office. That is where we began," Sebastian says, "but now, as vehicles become more complex, our solutions do much more than that. We've added a camera recording system that shows what is happening on the road. This is very valuable for insurance companies when an accident occurs – they can see what the cause was. It monitors the inside of the vehicle so if there is any dispute within the vehicle Management can see exactly what happened."

With computers in vehicles generating a great deal of information, i Vision is providing more products to take advantage of the information. "Just for vehicle tracking, the computer provides much more information that is valuable for the owner to know. Our products keep up with these developments so they become of more value to the end user."

NTU And Bluesg Launch Ultra-Fast Charging Electric Shuttle

Developed by the Blue Solutions, Bolloré Group, the shuttle undergoes quick charging at charging stations while passengers board or alight.



Nanyang Technological University, Singapore (NTU Singapore) and BlueSG Pte Ltd, a subsidiary of Blue Solutions owned by the Bolloré Group, have launched Singapore's first flash-charging electric shuttle.

Charged in 20 Seconds

Named the NTU-Blue Solutions Flash Shuttle, the fully electric vehicle only requires 20 seconds to recharge at stations which are fitted for quick charging while passengers board and alight. The Flash Shuttle uses Bolloré's Bluetram vehicle, which aims to be as efficient as tram systems, but comes with fast-charging and emission-free continuous operation.

The road trials planned for the 22-seater shuttle will be between NTU's Halls of Residence at North Hill and JTC's CleanTech One, which is part of the Jurong Innovation District, where special charging stations have been built.

The shuttle was launched recently by NTU's Vice President (Research) Professor Lam Khin Yong and BlueSG's Managing Director Mr Franck Vitté and witnessed by the French Minister of Higher Education, Research and Innovation, Ms. Frédérique Vidal.

Vision for Smart Campus

NTU President Professor Subra Suresh, said: "The move to introduce electromobility and cutting-edge transportation technologies is part of our vision to transform NTU into a Smart Campus. The use of electric vehicles in public transportation is rapidly expanding across the world, as it offers more efficient transportation systems and reductions in greenhouse gas emissions.

"As a leading global university with deep expertise in sustainable technologies, the NTU Smart Campus is already a living testbed for various sustainable and energy-efficient technologies, and the perfect partner for BlueSG to test and develop electric shuttles for Singapore. We expect that the insights and innovations developed from this partnership will ultimately benefit Singapore and the world by enhancing the first-mile and last-mile transportation options," Professor Suresh stated.

Innovative Mobility Solutions

"We are very proud of our partnership with NTU, one of the most prestigious scientific institutions in the world" said Marie Bolloré, Managing Director of Blue

Solutions. "The launch of this very first Bluetram in Singapore, for the students and professors of NTU, further validates the technology and expertise of the Group in the field of electric battery. Our ambition is to make available innovative mobility solutions to the greatest number (individuals, states, communities and companies) that respect the environment."

This research partnership with BlueSG will run for two years and is supported by the Economic Development Board, Singapore. As part of the trials, NTU students will also be able to ride the shuttle from the second half of 2018.

Tram-like efficiency with fast-charging

Unlike electric vehicles that function solely on batteries, the Bluetram replicates the efficiency of trams by operating continuously without the need for offline charging. Equipped with supercapacitors and a LMP® battery developed by Blue Solutions, the shuttle can travel two kilometres on a single charge, with backup power that provides for an additional 30 kilometres.

The costs of operating Bluetram is five to ten times lower than tram systems as it does not require costly infrastructure such as rails or catenary, and a whole line can be deployed in a matter of weeks.

The joint research team comprising scientists from NTU's Energy Research Institute (ERIAN) and BlueSG will study the actual on-road performance of the Bluetram in Singapore's tropical climate, including the user behaviour of passengers.

Electric vehicle car-sharing in NTU

As part of NTU's Smart Campus initiative, the university is in talks with BlueSG to install electric vehicle car-sharing stations. These will add to the existing pool of electric vehicle charging stations around campus. It will enhance NTU's connections with nearby communities in Jurong West, Jurong East, Choa Chu Kang and Bukit Panjang, and to the rest of Singapore.

Students, staff and faculty will be able to rent a BlueSG vehicle and can drive it around Singapore and return the vehicle to any BlueSG charging station. Members of the public can also drive into NTU's campus using the convenience and flexibility of the BlueSG programme. **F**

Volvo Trucks Wants Fewer Trucks in Urban Rush-Hour Traffic

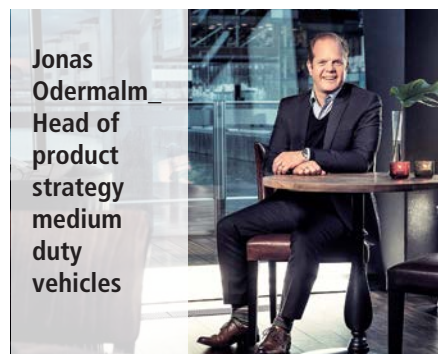
With cities to become even more populous, Volvo Trucks is working on solutions to decrease rush hour traffic and improve productivity.



Claes Nilsson
President
Volvo Trucks



Jonas Odermalm
Head of product strategy
medium duty vehicles



In 2019 Volvo Trucks will start selling electric trucks in Europe, and the first units will be put into operation with selected reference customers this year. Electric trucks drastically reduce noise and exhaust emissions and open up new ways to manage logistics. More transport assignments can be carried out at night and fewer trucks will compete for road space during rush-hour.

Commitment to Sustainability


"Electromobility is fully in line with Volvo Trucks long term commitment for sustainable urban development and zero emissions", says Claes Nilsson, President Volvo Trucks. "By using electrically powered and quieter trucks for goods transport in urban areas, we meet several challenges simultaneously. Without disturbing noise and exhaust gases, it will be possible to operate in more sensitive city centres. Transport may also take place throughout less busy periods, for example in late evening and at night. This will reduce the burden on the roads during daytime rush-hour traffic, allowing both the road network and vehicles to be utilised far more effectively," says Claes Nilsson.

A recent project, Off Peak City Distribution, conducted by Stockholm City, Sweden and KTH Royal Institute of Technology studied the effects of goods transport at night in central Stockholm. Since the trucks avoided having to operate in rush-hour traffic, transport assignments were carried out in one-third of the normal time.

Benefits of Night Hours

In order to improve the quality of life in urban environments more sustainable transport solutions need to be adopted. With well-developed logistics and more effective utilisation of roads in the evenings and at night, it is possible for many smaller vehicles to be replaced by fewer, but larger vehicles, thus further contributing to lower emissions and less traffic. A distribution truck has just over ten times the load capacity of a regular van. If a larger proportion of

transport assignments could be carried out during hours when fewer people are on the road, this will significantly reduce the risk of accidents.

"Our technology and knowhow within electromobility are based on proven commercial solutions already in use on Volvo's electric buses, and solutions that were introduced in Volvo's hybrid trucks as far back as 2010. The vehicles are only one part of what is needed for large-scale electrification to succeed. Enabling long term sustainable transport is a complex issue that requires a holistic and wide range of measures. We are working closely with customers, cities, suppliers of charging infrastructure and other key stakeholders to create the necessary framework for electrical trucks," says Jonas Odermalm, Head of product strategy medium duty vehicles at Volvo Trucks. "We believe in full electrification for urban distribution as a first step. However, we are working with electrification for other transport applications. This is only the beginning", concludes Claes Nilsson. 

Bee'ah to Add 50 All-electric Tesla Semi Trucks to its Fleet

Bee'ah is the first organization in the Middle East to order 50 electric Tesla Semi trucks. They will hit the roads in the UAE from 2020.



His Excellency Salim Al Owais, Chairman of Bee'ah

In line with its efforts to provide a better quality of life in the Middle East, Bee'ah, the region's fastest growing environmental management company, has underscored its vision for sustainability by purchasing the first and largest fleet of Tesla Semi trucks in the Middle East. The announcement was made at the "World Future Energy Summit", which took place in Abu Dhabi.

Commitment to Sustainability

Bee'ah placed an order for 50 of the automotive brand's revolutionary all-electric vehicles immediately after their launch on November 16, 2017 to underline Bee'ah's commitment to sustainability across its operations.

The Tesla Semi trucks, which enter production in 2019, will be used for waste collection and transportation, including transportation of materials for recovery. They will add to Bee'ah's growing fleet of vehicles, which totals over 1,000. The organization continues to upgrade its

transport options in making the fleet as eco-friendly as possible. Bee'ah's modernized fleet will continue to make a significant contribution to reducing the company's carbon footprint, and that is by using the new Tesla Semi trucks alongside its existing electric vehicles, vehicles that run on compressed natural gas and ones that run on bio diesel.

Striving to be the Best

"We are extremely pleased to turn towards Tesla for a solution that enhances our leadership of sustainable practices in the region. As a company that strives to be the best in our field, we only work with partners we consider to be the best in theirs," commented His Excellency Salim Al Owais, Chairman of Bee'ah. "Through this investment, we hope to demonstrate the value and importance of seeking out better, more viable ways of achieving our business aims, all for the greater good of our communities," added Al Owais.

"As a torchbearer for environmental responsibility, Bee'ah's move to bring the first and largest fleet of Tesla Semi trucks to the region is a significant milestone in our operational evolution," commented Khaled Al Huraimel, Group CEO of Bee'ah. "Sustainability is at the very core of what we do, and the pursuit of this feeds into every level of our organization. That is why we have made this investment, which occurs with a view towards a larger goal - achieving the objectives of the National Agenda for UAE Vision 2021," added Al Huraimel.

Bee'ah's latest involvement with Tesla isn't its first. Earlier the organization made a major investment with Tesla to fit the company's world-leading Powerpack battery technology at Bee'ah's state-of-the-art net zero energy headquarters complex, which is currently under construction. **T**

Hengst Oil Filters: Not Just Clean, But Pure

To ensure reliable performance of the engine, one needs protection for all applications, starting with the delivery of oil that is free from harmful substances.



Oil filters made by German brand Hengst are high-quality products that ensure engines are efficiently lubricated at all times and under all conditions. Efficient filtration forms the basis for optimal performance and safe operating conditions. They filter dust, metal abrasions, soot and other impurities.

Pure Oil Guarantees Consistent Performance

Depending on the application, several hundred litres of oil are pumped through an engine to reduce friction of moving parts and thus, premature wear-out is prevented. Today, engine technology has become much more complex and the oil drain intervals have been prolonged significantly. These developments demand higher specifications from the engine oils as well when it comes to the purity of the lubricants. To ensure that the oils are pure and free from harmful substances, the use of high-quality filters is necessary, also in view of the prolonged intervals for filter changes. Hengst filters contribute positively to the reduction of wear, thanks to the highly efficient filtration, and thus, increase the lifespan of the engine as well as its performance. This way, increased fuel consumption and the increased emission readings that would come with it, can be avoided.

Engine Oil Filtration at Highest Levels

Oil filters made by Hengst are matching OEM quality. To reach this level of quality, the company is only using the latest and most up-to-date materials, applying synthetic fibres, impregnation and grain sizes that ensure the highest dirt collection in their manufacturing process. In addition to that, Hengst filter offer high temperature stability and mechanical integrity to withstand pressure differences, as well as high-quality sealants that withstand extreme variations in temperatures. A reliable connection between seal, filterpaper and the end plate is the guarantor for hassle-free performance.

All engine oil filters from Hengst are equipped with highly dependable back-pressure valves, which prevent the filters from running completely dry when the engine is switched off. Furthermore, these filters are equipped with valves that bypass the filter during the cold run phase to ensure a continuous supply of engine oil to the engine.

Screw-On Filters – The Easy Way


With this type of Hengst filters, the housing, with its pressure-sealed and flared, treaded end plate form a complete unit together with an integrated filter element. In case servicing is needed, the entire unit will be exchanged. All required components and valves, such as the filter bypass and back-pressure valve are housed in the case and are included in the unit. This ensures that the engine is protected during cold-run phases and in case the service intervals are extended beyond the recommended mileage.

Filter Inserts – Eco Friendly and Easy to Service

These are part of the innovative ENERGETIC-Concept. With this system, Hengst is offering clients a more eco friendly solution whereby ease of service is also ensured. In case of a filter service, only the insert needs to be replaced for this system. All other components, such as valves, lids and housing will remain mounted to the engine block for the entire lifecycle of the engine. Mechanics will love the fact that the filter change of this sophisticated system can be done without any contact between oil and skin. To do so, the lid will be loosed, causing the oil to drain via a valve into the oil sump. Once the unit is drained, the clip-on filter can be extracted together with the lid from the housing.

The use of Recyclat-materials is an important contribution to the protection of our environment. This allows for filter inserts to be recycled according to materials in a cost effective manner, whereby the filters are dismantled and materials are kept pure.

Pro-Tips

Whenever oil is changed, the oil filter should be changed as well. This is necessary as the duration for how long a filter can be used is defined by the OEM and the filters are engineered in accordance. When doing so, one should ensure that the spare parts used are always in OEM quality. Only such parts guarantee long lasting functionality through the use of high quality materials, precise manufacturing and air-tight wrapping. 

Milestones in UD engine history

The Famous UD Emblem – Sixty Years On



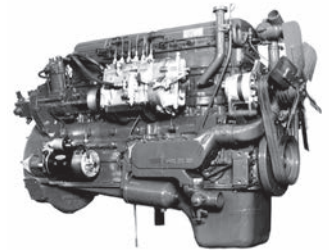
1955 First UD engine

Uniflow scavenging Diesel engine – the origin of the UD name – was the first Japanese-made engine to meet the market’s expectations to travel faster and farther. Engines capable of 200 horsepower were in huge demand in the fifties and the UD engine was the first in Japan able to deliver this.



1955 Powerful UD6

Five months later, the UD6 engine followed. With six cylinders and delivering 230 horsepower, it weighed 40% less and ranked as the world’s lightest engine per horsepower, beating fierce competition from around the globe.



The UD6 powered the popular 6TW, an iconic truck of its time, which played a major role in developing Japan’s infrastructure during its “Miracle Growth” years.

1964 V8

Not widely known is that UD launched a 330 horsepower V8 engine, marketed from 1964 to 1970.

1968 America, America!

After extensive tests and convinced by their performance and durability, Chrysler signed a long-term agreement to import UD engines to power its own trucks, and also boats and industrial machines. It was the first time a Japanese automaker had supplied major parts to an American one, at a time when Japan was not regarded as technologically advanced as the United States.

1971 Turbo era

A full ten years before Formula 1 experimented with it; UD was commercializing a turbocharged version of its PD6 engine. PD6T saw its power rocketing from 185 to 260 horsepower with the addition of the magic turbine.

1998 GE13 engine

With the introduction of ever-stricter environmental regulations in the latter half of the 1990s, UD focused on combining efficient engines with multi-gear transmissions to deliver the best possible torque at all times.



Their innovative efforts produced the GE13 engine, the world’s first to include a ball-bearing turbocharger for better mechanical efficiency, stronger throttle response and also less oil needed for lubrication. It came fitted with UD’s ESCOT-AT – Japan’s first electronically controlled semi-automatic multi-speed transmission for heavy-duty trucks. Together, the pair delivered a superb mix of power and mileage.

2004 Urea SCR system

The Japanese government set the world’s strictest emission regulations for trucks sold after 2005. The Research and Development engineers set to work, and UD once again made history by introducing the world’s first commercialized urea selective catalytic (SCR) system for heavy-duty trucks; it complied with the regulations without compromising on engine performance.

2010 From blason to brand



When Nissan Diesel was integrated into the Volvo Group, what better way to celebrate the union than naming the brand after its world-renowned performance symbol? UD has always been a symbol of power and reliability; it now stands proudly for Ultimate Dependability, opening a new page in the history of trucking.

2010 GH Series

The top-class series featured with ultra-high-pressure fuel injection to achieve fuel efficiency rivaling complete combustion, and a weight cut of around 10%. Together with the urea SCR system, it slashed the engine’s emissions to again meet the world’s strictest regulations in Japan. Mounted with this technology, the Quon set a global benchmark for fuel efficiency and environmental performance.



The Evolution of ESCOT Transmission



**ESCOT-V
gearshift**

UD Trucks introduced the Automated Manual Transmission "ESCOT" in 1995. For the past 20 years, the ESCOT has evolved to meet the demands of customers with the changing times of the transport industry.

What does ESCOT stand for? It means Easy Safe Controlled Transmission. As the name suggests, the ESCOT gearbox

aims to simplify the driving of heavy-duty trucks. With the stress of gear changing removed, drivers are able to concentrate fully on the road while exerting easy control over the truck under extreme conditions. Since 1995, UD Trucks has witnessed much innovative progress on their ESCOT and it has made significant contributions to the improvement in fuel consumption as well as safety.

Let us take you through UD Trucks' ESCOT innovations ESCOT-II

UD Trucks' first ESCOT-II transmission was launched in 1995. Being one of the rare automatic transmissions available in the market during that time, ESCOT-II was considered taking a big step forward in innovation. Targeted at heavy-duty Big Thumb tractor, ESCOT-II was a mechanical gearbox with a robotized clutch, featuring three pedals and a sequential gear stick. All the driver had to do was to shift and change the gears himself. The clutch is only needed to stop the vehicle itself. Unlike with a classic automatic gearbox, the ESCOT driver did not experience any hydraulic converter slippage, allowing him total control over his truck.



EASY / SAFE

**1995
ESCOT-II
12 speed**



**1998
ESCOT-III
12 speed**

ESCOT-III

ESCOT-III moved gradually towards a semi-auto transmission. After manually taking off in the first gear, the driver could let the gearbox change gear by itself or use the manual mode to change gears himself. There is also a fuel economy dimension, adding more gears to optimize the use of the engine in the most efficient torque range.



**1997
ESCOT-III
7 speed**

FUEL
ECO

**2003
ESCOT-IV
12 speed**

ESCOT-AT-IV

ESCOT-AT IV was the first fully automatic version of the transmission, with no clutching required to accelerate it from idle, except when reversing. This was the first ESCOT gearbox to be exported outside of Japan. In 2007, a switch for light load was added. It allows gear shift changes to happen earlier than in the normal mode, to allow better fuel economy when the truck carried no or only a light payload.



SMART
ECO

**2010
ESCOT-V
12 speed**

ESCOT-V

After years of research and development and countless test-drives, UD Trucks is pleased to introduce to you the latest technological breakthrough – the ESCOT-V. ESCOT-V represents the best of driving pleasure, fuel economy, safety and reliability. With only two pedals, the gearbox is fully automated. Gearshifts are made even quicker and smoother due to computer-controlled mesh synchronizing. Gear changes programmed have been refined to adapt to various payloads and optimize fuel economy. Combined with the state-of-the-art mechanical and electronic technologies, ESCOT-V allows drivers to have a pleasant and responsive driving experience, and yet at the same time help fleet managers to lower their operating costs and achieve better fuel efficiency.



**2014
ESCOT-V
12 speed**

Acceleration limiter

UD Trucks Combines the Best of Two Worlds



Volvo Group's CEO Martin Lundstedt says that UD Trucks will meet its customer's needs by combing the best of two worlds.

Since its foundation, UD Trucks has been a challenger, pushing the boundaries in product development and innovation. Together with its parent company, the Volvo Group, UD Trucks is now also innovative in its business model to provide the trucks and services the world needs today by utilizing the best of the two worlds – the strength as a Japanese automotive manufacturer and Volvo Group's support.

On a recent visit to Japan Martin Lundstedt, President and CEO of the Volvo Group, talked about his views on how UD Trucks is performing and where he sees it heading.

What was the purpose of your visit to Japan and what was your impression?

"Volvo Group's Executive Board holds monthly meetings at key locations around the world to engage with our local businesses. This time the

meeting was held in Japan. Our other objective was to visit various Gemba including Customer Centers, factories and UD Trucks' head office, where we spoke directly with colleagues from different business areas, receiving valuable feedback and insights. I was particularly impressed with the strong improvements in colleague engagement and business performance."


How does the UD Trucks operation maximize its strengths in the Volvo Group?

"In 2016, we changed UD Trucks' setup, decentralizing decision making to the management based in Japan for the entire company. Now UD can more clearly and easily leverage the best of the two worlds – the strength as a Japanese automotive manufacturer and Volvo Group's support. This change has generated a sense of unity among UD colleagues, encouraging cross – functional communication and heightening a sense of brand ownership. And we have seen a stark improvement in performance; UD Trucks' gross income during the period of January to September 2017 increased by 30%, compared to the same period last year. That has contributed to the Volvo Group's third quarter performance which recorded its 11th consecutive profitability improving quarter."

What is your view on the disruption currently happening across the automotive industry, and what business models do you think are necessary 'to win' in this era?

"The Volvo Group and UD Trucks sees disruption as a good opportunity to better serve its customer base with the trucks and services the world needs today. When automation, electromobility, and connectivity converge, we foresee an improved logistics efficiency and productivity, decreased environmental impact and increased traffic safety. UD Trucks is in a great position to leverage Group's technologies with whatever it needs, and also add local engineering to adapt to its needs. It is worth noting the technical requirements for heavy duty trucks in Japan correspond to those for medium duty trucks in Europe. That means that the Group can apply its already proven technologies in Japan. UD Trucks has already started discussing with its leading customers about their future needs. The key to going the extra mile for its customers, which is the UD brand promise, is to build a new business model that focuses on core competencies whilst establishing relationships across the industry in order to leverage available resources as effectively as possible."

What does the future hold for UD Trucks?

"UD Trucks is poised to play an important role in the Volvo Group when developing new technologies as we jointly continue to invest in technology development, production, sales and service networks. More short term competence development is another priority. UD Trucks will open its new competence development centre during early 2018 as it believes people's development is as equally important as technological development for sustainability over the long term." 

Dissecting the UD Gemba Spirit

Four Benefits UD Brings to its Customers

The UD gemba spirit is one of UD's great secrets for excellence. It can be best described as the professional, passionate and dependable spirit of the staff. It is the willingness to get close to the ground to identify key areas for improvement.

Kenzo Adachi's 3000-km test drive of his truck prototype in 1939 might be the best-known example of the UD gemba spirit, but many of UD employees – whether they are managers or technicians – all practice and live the gemba spirit in their own unique way.

In this article, UD looks at the four ways that their customers can benefit from the gemba spirit. **F**



Understanding

In Japanese, gemba refers to “the real place”, or “where the action happens”. Every day, UD Trucks' workers, engineers and service advisors, go to the gemba to observe, learn and understand each other and from their clients. That's how they are able to offer great trucking solutions.



Did you know? In addition to learning on the job, UD mechanics also participate in an international mechanical skills competition: The “UD Trucks Gemba Challenge” held within UD Trucks, offers UD Trucks mechanics from around the world a chance to excel at their individual skills and collaborate as a team.

Peace of Mind

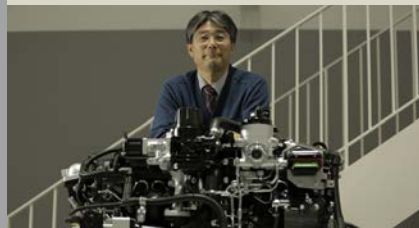
UD Trucks are ultra-reliable for maximum uptime. They keep your business moving forward in all conditions - all the result of the dedication and hard work of UD people at customer centers. UD Trucks internal organisation is kept flexible and responsive, so they are always ready to provide you with anything from spare parts to technical advice.



Did you know? UD Trucks' managers constantly communicate with their staff on the ground, so they know exactly what your requirements are – right down to the tiniest details.

Flexibility

From your gemba and experiences, the people at UD Trucks collect information to help them design the best trucks and offer the most adapted services for your needs.



Did you know? UD provides localised solutions for customers in over 60 countries, customising trucks according to customer's needs.

In Australia, UD trucks cope well with the oppressive heat of the outback.

In Namibia, UD trucks conquer both gravel roads and treacherous gradients. The gemba spirit ensures customers' needs are answered quickly – no matter the conditions.

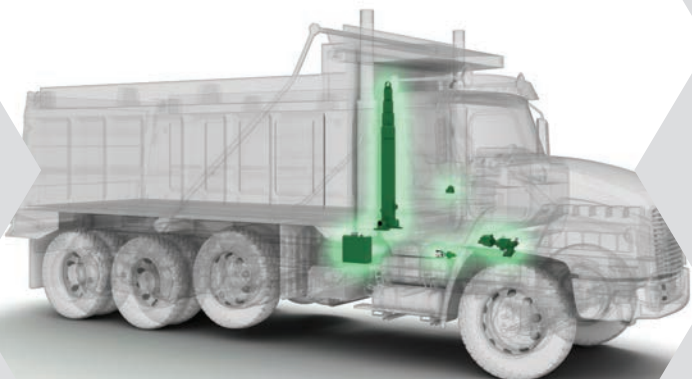
Responsiveness

UD Trucks works close to, and closely with you to understanding your business needs. Their after-sales, manufacturing, engineering, and design departments work cohesively to allow them to answer your needs and requests in a timely manner, even when unplanned situations arise.



Did you know? UD Trucks might be a large company, but they prefer to act like a small one. The UD headquarters is strategically located at their manufacturing site in Ageo, Japan. This allows them to facilitate quick and efficient communication between the two departments.

THE COMPLETE HYDRAULIC SOLUTIONS



Hoist



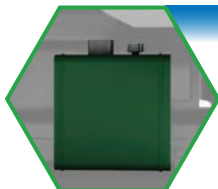
- Engineered for long life
- All moving stages are chromed externally
- Capped last stage to avoid bleeding
- Short closed height for great interchangeability

Air Control Valve

- Variety of options to suit all applications
- Robust design for hard work
- Easy to install



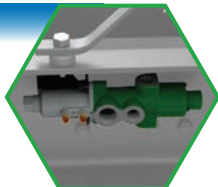
Tanks



- Steel & Aluminium options
- Round and Square for side or over chassis mounting
- Sizes from 55 to 220 ltr

Control Valve

- Single and two spool monobloc valve for tippers, Australian designed for rugged conditions
- Full range of sectional valves for all applications
- Quality engineered for long service life



PTO & Pump



- Designed to meet tough Australian conditions
- Full range of PTO's to suit most transmissions
- High Performance Pumps for every application.
- Gear and Piston Pumps from 25cc to 115 cc
- Single and Bi rotational

MCVE 2019 Sees High Demand



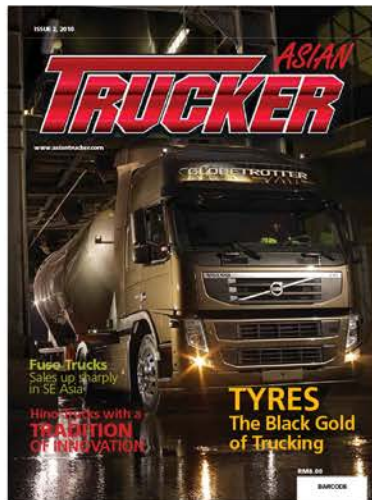
Now a fixed calendar event, South East Asia's largest commercial vehicle exhibition is seeing a faster take-up of space compared to previous shows.

Returning for the fourth time, South East Asia's largest commercial vehicle exhibition is again organised by the team behind Asian Trucker. Hosted in its usual location, The Mines, the event has attracted a substantial number of exhibitors already. Said Stefan Pertz, Organiser of MCVE 2019 "We have received bookings for over 60 percent of the space already. Compared to the same time before our last exhibition, that is a tremendous uptake in the space. This is encouraging for all of us as this indicates that our formula for the exhibition is right."

The date for the exhibition is set to be 20 to 22 June 2019 and the timing will be 10am to 7pm. Organisers commented that the fringe program will be as extensive as always, with the first speakers already taking up time on the stage. "Exact details will be announced in due time. We are currently working on a few ideas and some of these need to be confirmed before we want to release any information," Pertz said further.

Last year's MCVE saw a continued increase in visitors as well as exhibitors with over 600 guests at the networking night, the signature sub-event during the three days exhibition and many exhibitors bringing business negotiations to a close. More information can be found on www.mcve.com.my and the Asian Trucker team stands ready to consult interested parties regarding their participation.

Subscription Form



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A Cab With a View

Visibility, being able to see what is close to the truck, is important to drivers and pedestrian safety. The Scania City Safe Window gives the driver an improved view.

With the Scania City Safe Window, drivers have a better opportunity to detect nearby pedestrians and cyclists. The window on the passenger side door is available for all P- and L-series cabs, which are most common in urban applications.

Anything that can contribute to a greater overview and sense of being in control in relation to the surrounding environment is highly advantageous and can be decisive in crowded urban areas.


Scania P 220 cab exterior, city safe window

Photo: Dan Boman

"The door window significantly raises safety and helps reduce what is a commonly stressful situation among drivers in cities," says Jorge Gutierrez, Product Manager, Scania Trucks. Adding cameras and sensors in no way invalidates the need to actually see and establish visual contact with surrounding pedestrians and cyclists.

Scania L-series cab interior, city safe window

Photo: Gustav Lindh

Especially in narrow and crowded urban areas, the City Safe Window helps reduce what is a commonly stressful situation for drivers. 



Enhancing Vision and Safety with Digital Rear-View Mirrors

A revolutionary new system eliminates the need for conventional mirrors while improving the driver's view.

Digital rear-view mirrors on trucks can replace conventional mirrors, reduce blind spots and improve visibility, according to a recently completed research project. This is a first — a digital camera mirror system that could completely replace conventional rear-view mirrors on trucks.

A New Solution

Rear-view mirrors have not evolved a great deal since they became necessary in the 1960s as a result of the increasing number of highways worldwide. Now things could be set to change as a new solution has been developed for truck manufacturers thanks to RISE, Scania and Stoneridge Electronics AB.

Along with Scania vehicle ergonomist Hanna Staf and technicians from Stoneridge Electronics, Azra Habibovic, project leader at the Swedish research institute RISE Viktoria, has created a digital rear-view mirror system prototype that represents a clear step forward. The prototype includes cameras mounted near the upper front corners of the exterior of the cab. Displays on the inside of the cab show the rear view in real time.

Driver's Direct Vision Improved

By replacing conventional rear-view mirrors with digital ones, the driver's direct vision is improved. "Traditional rear-view mirrors typically block drivers field of vision,

by replacing them with digital systems it enables drivers to detect pedestrians and cyclists much easier — a typical problem at urban intersections and roundabouts," says Habibovic.

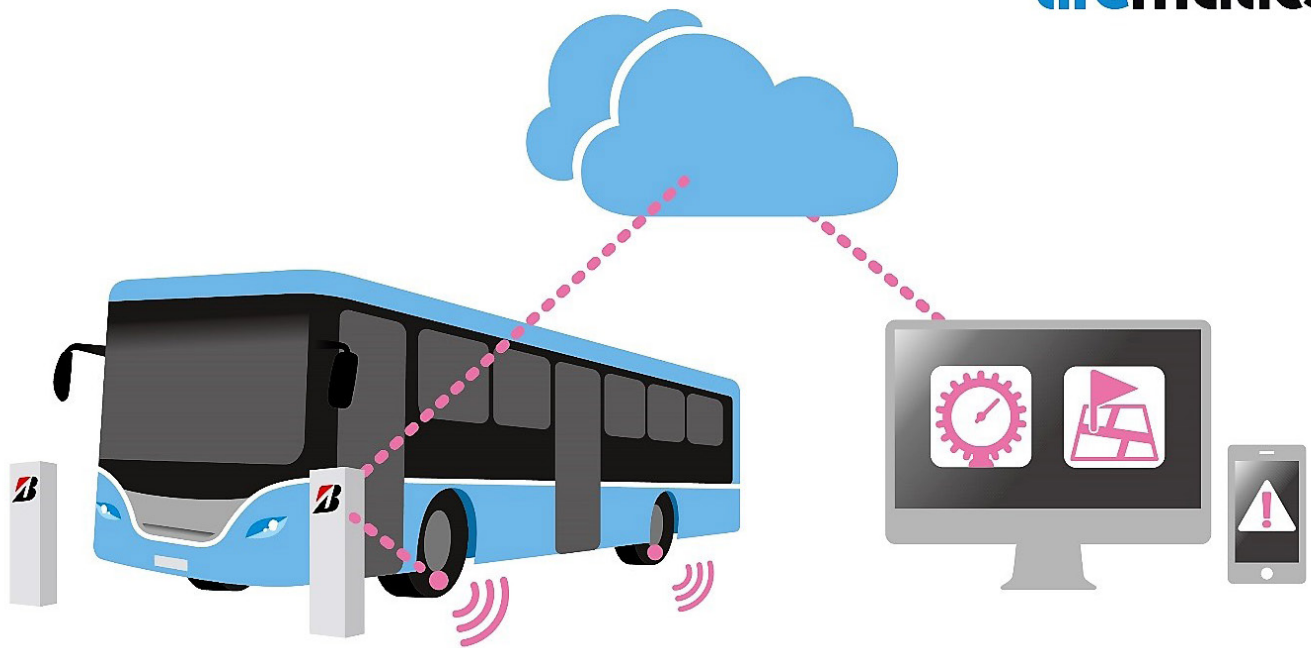
The prototype provides a larger field of view and reduces blind spots, making the driver more aware of potential hazards around their trucks. Furthermore, Habibovic explains: "The automatic panning of the main view is especially useful for following the trailer end when turning or reversing. It eliminates the need for body and head movements to increase the field of view, which is usually the case when using conventional mirrors."

Better Visibility When Windows Are Dirty

Another advantage is that the prototype provides better visibility when door windows are dirty. During adverse weather conditions, it can be a challenge for truck drivers to spot objects in conventional mirrors.

In addition to safety, the digital rear-view system offers reduced air-drag, and enhanced night-time viewing is also possible through an inbuilt infra-red system.

"Replacing conventional mirrors with digital systems creates a unique opportunity to improve drivers' visibility and night vision," says Staf. This improves safety while creating a more comfortable driver environment. **T**



Bridgestone Tirematics Solution for Yard Management

After a successful launch in Europe Bridgestone is now running a pilot programme in Asia Pacific to test its Tirematics solution.

Piloted in Asia Pacific

Bridgestone has launched a pilot of its Tirematics solution for yard management in the Asia Pacific region. Using the latest IoT and Cloud technologies, Tirematics facilitates fleet management and enhances operational efficiency. This solution is initially being deployed in Singapore and Thailand.

Tire Monitoring

Tirematics solution for yard management is a comprehensive package that includes a full range of premium fleet solution services to address customers' needs. The combination of sensors and a new cloud-based engine enables real-time monitoring of tyre pressure and temperature, with a high degree of accuracy and instant alerts when vehicles enter the depot.

The system automatically alerts service managers and drivers via email or SMS when abnormal tyre air pressure and/or temperature is detected. This enables Bridgestone to positively impact customers' daily business operations through reduction of tyre maintenance costs and occurrences of tyre-related breakdowns.

New Enhancements

Since 2013 Tirematics Solution has been successfully deployed in Europe as part of its fleet service programme. The launch in the Asia Pacific region comes with multiple

new enhancements and a scalable proprietary cloud-based engine. These new enhancements aim to reduce investment and simplify requirements.

The next-generation Tirematics solution for yard management in Asia Pacific is a practical, cost effective fleet-oriented solution that positively impacts fleet operation.

Digital Innovation

Linked with the new cloud-based engine, Tirematics provides integration with Toolbox, (Bridgestone's proprietary application for tyre audit and performance tracking with CRM) to deliver end-to-end asset management capabilities to our customers. Toolbox allows customers to instantly access tyre information to analyse and make informed decisions on optimal tyre maintenance and selection.

"Digital Innovation is at the core of Bridgestone's business and through solutions such as Tirematics solution for yard management, we aim to deliver value to our customers by proactively anticipating and addressing their needs and expectations," commented Tao Yang, General Manager of Commercial Marketing Department, Bridgestone Asia Pacific Pte. Ltd. "We see great potential for Tirematics solution for yard management in Asia Pacific and expect to expand this solution gradually across the region in the coming months." 



Modern Distribution: Do we need more or more intelligent solutions?

Stefan Pertz

Numbers are up! That is good news. And the increased acceptance of e-commerce has led to a boom in applications to be developed and new distribution channels to be opened. Now, everyone can buy goods, no matter where they are, and get them delivered to their doorstep the next day. We can have our bananas delivered to our home, completely cutting out the dreaded trip to the market. Things are being moved and they are being moved fast.

New Paradigm

“Because we can” seems to be an approach and attitude that we have developed in the past few years when it comes to the use of transportation. I remember that my grandpa would warm up his VW beetle once a month to go to the supermarket, some five kilometres away, where he would buy in bulk sugar, flour, pickled cucumbers, canned veg and milk. That way, he would maximise the trip and the family had all they needed for a month. Today, we can get almost anything delivered to us, for a small fee. Distribution networks are much finer, wider and comprise of more vehicles to ensure that we get our goods within the shortest possible time. Forgot the baby powder? No problem, let’s get a mini-van to bring it to us.

Is more better?

Modern technology has made things more convenient. But is that necessarily better? Seeing that more and more people live in urban areas, cities are becoming more and more crowded with traffic congestion being a major issue everywhere. We asked for more and we got it. But we also got more of the bad stuff with it: stress, congestion, pollution and an accelerated use of natural resources. Somehow, the system my grandpa had going worked and it was less taxing on the material, his trusted Beetle (He had two motor vehicles in his life. A red Beetle and a

blue one). It might have required a bit more thinking and planning to ensure that one got everything during that monthly pilgrimage to the temple of consumerism, but at the end of the day, everything needed was there.

Complicated System

If we look at the current way distribution is done, we realise, it has become complicated. Very complicated. And in our pursuit to have goods ever faster dispatched and in the hands of the buyer, we add layers to the system. Now we need tiny vehicles for the last metre delivery. In essence, we add more transportation systems and solutions. While distribution has certainly become cleverer, is it really smarter? For instance, we have very powerful trucks, but they are still just pulling relatively small trailers. Couldn’t we have more B-Doubles, thus reducing the impact on the environment, reduce the overall number of vehicles on the road and move more with less?

A Case for Transportation

When I say that we need smart transportation, I don’t necessarily mean we need to stop shipping goods. Sometimes a different approach may be smarter, using trucks. For instance, a warehouse sale for older models of Apple products was cancelled as the waiting crowds were about to riot. An Apple I-Phone 6 is rather well defined and if you want one, you would very likely know exactly what you are getting. In this case, wouldn’t an online portal have made sense where you buy the goods which are then shipped to you? Apparently some 11,000 people were sent home empty handed. That is 11,000 people that all made individual trips, clogged up roads and public transport, using up petrol and other resources. Less than 100 items were listed for sale. And the irony is, Apple has contributed a great deal to on-line commerce, and yet they didn’t use it for their own products. **f**

Hino Sets Records at Dakar Rally 2018

Hino had ups and downs at the 40th edition of the Dakar Rally, but in the end, the team had a very satisfying performance.

Photo DPPI © DPPI



NIKOLAEV EDUARD (RUS) Legende ,
Kamaz Photo Francois Flamand - DPPI
Francois Flamand - DPPI

For the Hino team there was victory and disappointment as HINO TEAM SUGAWARA entered two vehicles in the challenging annual race, but only one managed to finish the 2018 Dakar Rally. An ill-fated problem forced Hino Car 1 crewed by Yoshimasa Sugawara, the race's oldest competitor, and Katsumi Hamura to withdraw from the race.

Huge Failure

"Although this event turned out to be a huge failure for me," said Yoshimasa Sugawara, "I am going to leave all of that behind and get to work to enter the rally again next year. I think Teruhito did really well this year considering the very difficult courses that we were all up against this year."

The 2018 Dakar Rally was the 40th edition and the tenth successive year that the event was held in South America. The Rally started in Lima, Peru, on January 6, and ran through Argentina and Bolivia, finishing in Córdoba, Argentina, on January 20 after 14 stages of competition.

Huge Win

Hino's second truck, the HINO500 Series truck finished sixth overall and snatched its ninth consecutive win in the Under 10-litre Class. Teruhito Sugawara and Mitsugu Takahashi the crew on Car 2 delivered a stunning performance beating out many of its larger rivals powered by 10 litre-plus engines for its sixth place ranking overall (accumulated).

Teruhito Sugawara stated, "I had a great time every day as we faced a succession of difficult courses back to back, and raced in many areas that we'd never been to before. This was the 20th Dakar Rally for me personally, and I'm glad that we were able to achieve the results that we aimed for. I think we were able to make the best of our current potential, so it was very satisfying in that respect too. Right now, I'm just relieved."

The Final Stage

It was around 1:00 am when Car 2 arrived at the bivouac in Córdoba at the end of an extra-long 900 kilometer stage that started off on January 19. Mechanics inspected the truck with no sleep or breaks and prepared the truck for its last SS that was set to start off in the morning. Upon leaving the bivouac racers travelled northwest on a 71km liaison, and then raced a 119 km looped SS at the base of the Córdoba mountains.

This was followed by a 94km liaison that took them back to the bivouac. Once there, the racing vehicles formed a line according to their finishing order before heading out at around 8:00pm to the podium. The course of this day's SS consisted mostly of twisty gravel roads and pistes (unpaved roads) in intermountain areas. While no major changes in ranking positions were expected to occur due to the short distance of the SS, any team that failed to finish the SS would not be recognized as a finisher. Nor would they be assigned a ranking position.

"We couldn't have asked for a better outcome," stated Mitsugu Takahashi. "I think our sixth-place ranking is pretty fitting for where we are. I was also happy to have been able to navigate for Mr. Teruhito. Today's SS, the last one in the race, required almost no navigation so I had a lot of fun pushing him among other things."

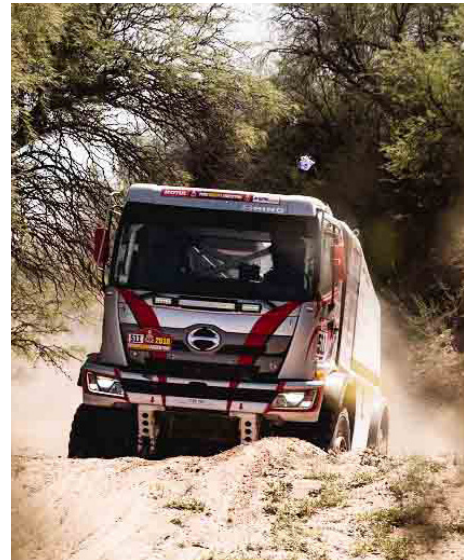
Hoped for Results

Hino chairman, Yasuhiko Ichihashi, was present at the venue to congratulate the team's mechanics and staff members as well as show his appreciation for the work that they had put in over the past year. "I am very happy that the team was able to fulfil their goal of achieving their 9th straight win in the Under 10-litre Class. While Car 1 had to withdraw from the race, I'm glad that Car 2 was able to deliver the results that we had hoped for. We intend to continue our various activities as Hino Motors."

"It was really unfortunate that we had to withdraw from the race," Katsumi Hamura said, "but Car 2 more than made up for that so that was great. I wasn't feeling very well in Bolivia but I'm doing fine now."

Fatiguing Rally

"This was the most fatiguing of all Dakar events that I've ever been in," said Seiichi Suzuki. "I think that's a reflection of how challenging the courses were. I was particularly amazed at how other teams were also having problems already in the first half of the rally. That being said, I am very happy with Car 2's results."



The Hino team set three records at the 2018 Dakar Rally. It was the ninth straight win in its class, 27th consecutive finish, and 35 consecutive starts for Yoshimasa Sugawara. The sixth place finish in overall rankings in the trucks category, was higher than last year when they placed eighth.

The Ironman of Dakar

Driver Yoshimasa Sugawara (76 years of age), aka the "Ironman of Dakar," also rewrote the world record for the most consecutive starts in the Dakar Rally to 35 from the time he first entered the then Paris-Dakar Rally in 1983 in the motorbikes category. While he was forced to exit this latest rally after his truck got stuck in a dune in stage 2, early in the rally, he says, "I've always maintained that the Dakar Rally is the 'school of life.' It appears that the god of Dakar Rally doesn't want me to graduate just yet. I am going to leave all of that behind and get to work for next year's rally. Teruhito did really well considering how the course designs were very difficult this year," congratulating his son for his stunning performance and asserting his own determination to enter next year's event.


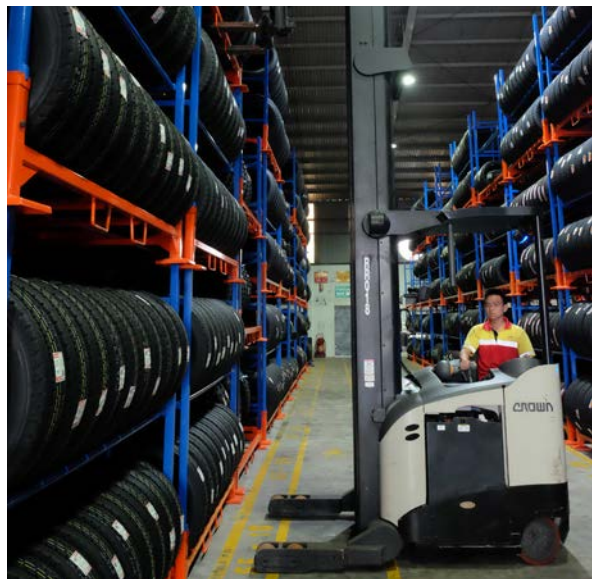
This year also marked the 27th consecutive finish for Hino since it became the first Japanese maker of commercial vehicles to enter this rally in 1991. On January 20, Hino chairman, Yasuhiko Ichihashi, who was present at the goal ceremony in Córdoba, Argentina remarked, "Listening to team members on how the rally was going, I was reminded that the Dakar Rally truly was the 'world's most grueling rally.'" 

Photo Francois Flamand / DPPI ©Francois Flamand / DPPI





DHL to Manage Bridgestone's Da Nang Operations

(Da Nang, Vietnam) DHL Supply Chain has been appointed by Bridgestone to manage its warehouse facilities and management, plus outbound transport management. DHL will utilize its own fleet and sub-contracted vehicles to deliver to Bridgestone's distributors in Vietnam's central provinces. The new Bridgestone warehouse in Da Nang spans 3,000sqm.

To deliver Bridgestone's specially designed bespoke racking (stillages), DHL devised a flexible, efficient solution of tire storage to minimize damage and promote cost-efficient and timely transport to the central provinces. The stillages fit Bridgestone's TBR (truck, bus and industrial/commercial tires) and PSR (passenger car radial) tire ranges, and the warehouse can store 20,000 tires.

DHL Supply Chain plans to grow its footprint in Vietnam to build new facilities, expand truck fleets and invest in new technology. Kevin Burrell, CEO, DHL Supply Chain, Thailand, Vietnam, Cambodia and Myanmar, said: "DHL is able to differentiate from the competition by offering customized storage and distribution solutions, with technological and innovation investments focused on delivering exceptional client trust. We are proud to support Bridgestone, the long-admired global leader in tire technology, as both companies continue to grow operations in Vietnam. We are beginning to intensify our investments in warehouse and transport expansion in Thailand and Vietnam and will further expand over next three years. We are committed to help businesses operating in Vietnam to succeed, as the market continues to develop to meet its full potential." 

Daimler Strengthens Setup of its Truck Business in China

(Stuttgart / Beijing) Daimler is strengthening the focus of its truck organization for the Chinese market by implementing a dedicated responsibility within the divisional board of Daimler Trucks. As of January 1, 2018, Sven Ennerst has taken over responsibility for the company's trucks operations in China including local production at Beijing Foton Daimler Automotive (BFDA) as well as the import business at Daimler Trucks and Buses China (DTBC). Ennerst continues his current function as Head of Product Engineering and Global Procurement.



Sven Ennerst

Hubertus Troska, Member of the Board of Management of Daimler AG, responsible for Greater China, stated: "China is by far the world's largest automotive market – both for passenger cars as well as commercial vehicles. The further focused and strengthened setup for our truck business in China shows our deepening commitment to this market. With the new appointment, we will continue bringing global expertise to our operations in China, to further explore

the market potential with our local partners."

"We want to expand our position in the Chinese market," added Martin Daum, Member of the Board of Management of Daimler AG, responsible for Trucks and Buses. "That is why we are elevating the responsibility for China to the divisional board of Daimler Trucks. Sven Ennerst, one of our most senior and experienced leaders, will be taking over this important position in one of our key markets."

Sven Ennerst has gained valuable experience in China during his mechanical engineering studies there as well as his in professional career. He has also held management positions at Daimler Trucks for more than 20 years.

Kelley Platt will become President and CEO of Beijing Foton Daimler for the local production of heavy duty trucks under the Chinese Auman brand. Platt, currently the President of Western Star Trucks, will succeed Zhou Liang.

China is the world's largest commercial vehicles market. For 2017, the market is expected to be above one million heavy duty trucks. Together with Foton, Daimler has been building medium and heavy duty trucks under the Auman brand for the volume segment since 2012. As of October 2017, the joint venture BFDA sold about 91,000 vehicles – a 59% increase compared to the same period the previous year. 

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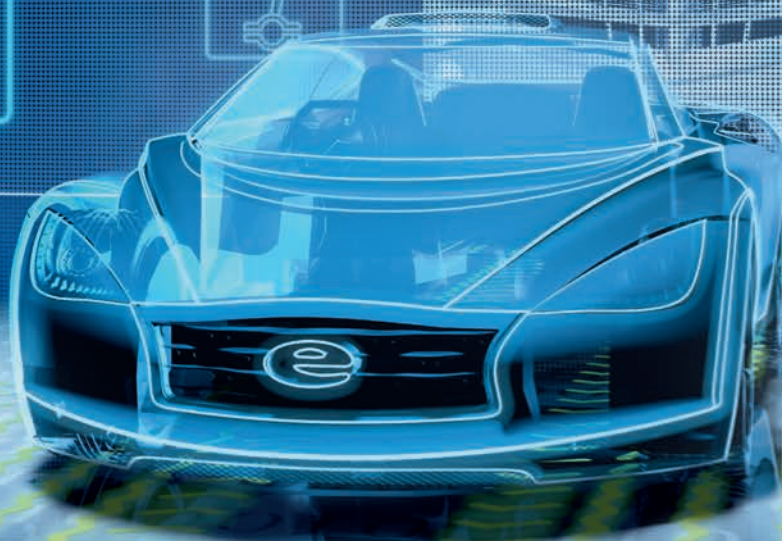
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