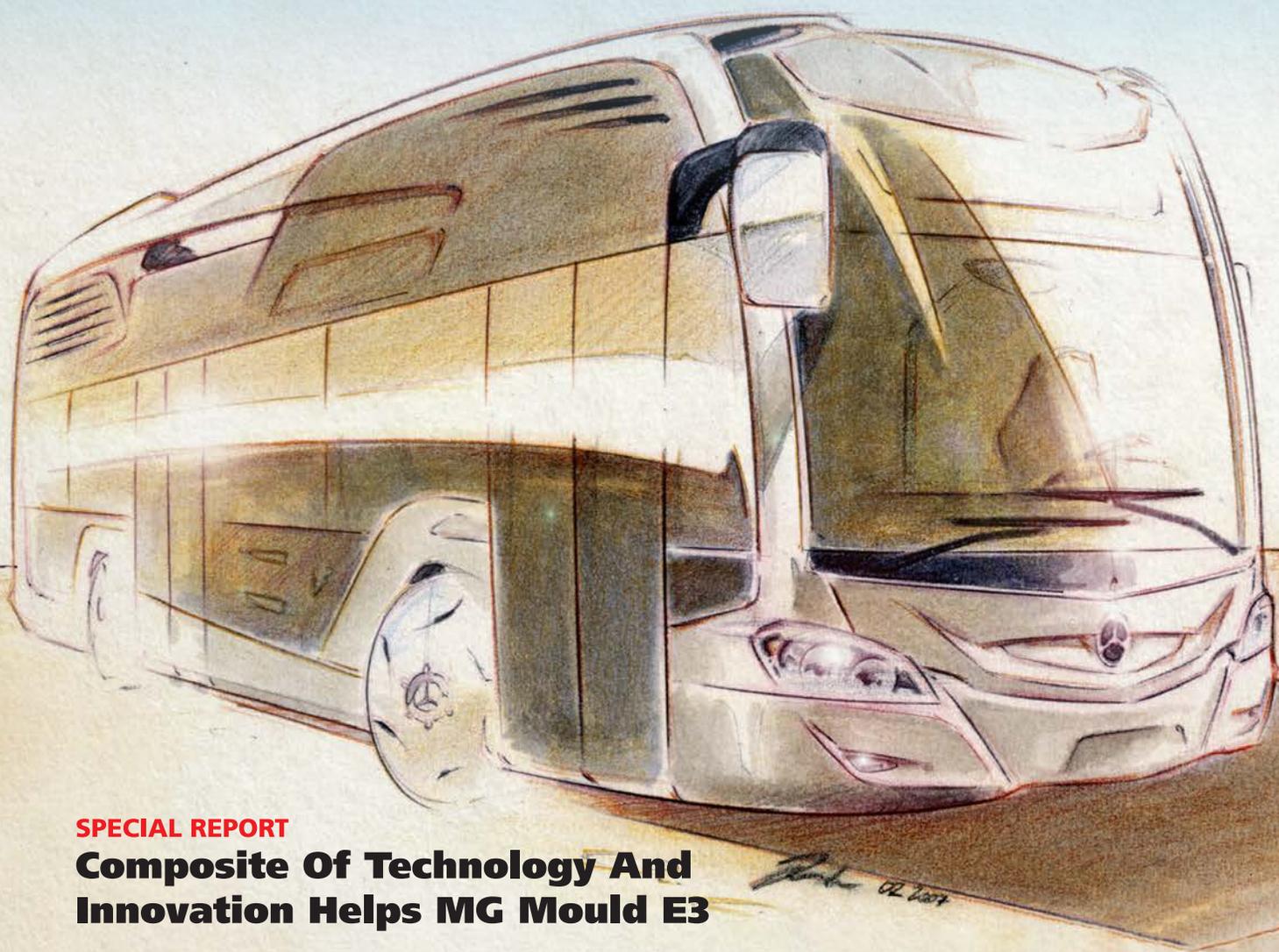


ISSUE 13 Q1, 2018  
RM8.00

# ASIAN BUSES

[www.asianbuses.com](http://www.asianbuses.com)



## **SPECIAL REPORT**

**Composite Of Technology And Innovation Helps MG Mould E3**

## **FEATURE STORY**

**When will Vehicles Become Entirely Autonomous?**

## **COMPANY PROFILE**

**i Vision Developing Smart Solutions for Bus & Trucks**

## **NEWS & NOTES**

ISSN 2289-8921



KDN PP18692/03/2015 (034159)

# CAPAS

CHENGDU

Chengdu International Trade Fair for Automotive Parts  
and Aftermarket Services

Book your  
booth now!

A leading platform for Southwest  
China's automotive industry

24 – 26.5.2018

Chengdu Century City New International Exhibition & Convention Center, China



45,000  
sqm



580  
exhibitors



20,000  
trade visitors



6 theme  
zones

[www.capas-chengdu.com](http://www.capas-chengdu.com)



messe frankfurt



# automechanika

HO CHI MINH CITY

Plan your visit today!



## An international platform to propel your business in Vietnam

### 25 – 27 April 2018

Saigon Exhibition and Convention Center (SECC), Ho Chi Minh City, Vietnam

9,200  
sqm

360  
International exhibitors

8,500  
Buyers

World-class fringe programme

[www.automechanika-hcmc.com](http://www.automechanika-hcmc.com)



messe frankfurt



AMHCMC |

# CONTENTS



22

## 34 - EDITOR'S NOTE

### MARKET UPDATE

- 12 - Land Public Transport at the Forefront of Transformation
- 14 - MCVE 2019 Sees High Demand
- 16 - Scania's Daniel Tan Sets a New Direction
- 18 - MaraLiner Gets Six New MAN Buses

## 19 - EVENT CALENDER

### EVENTS

- 20 - CAPAS 2018

### SPECIAL REPORT

- 22 - Composite Of Technology And Innovation Helps MG Mould E3
- 27 - Bridgestone Tirematics Solution for Yard Management

### SAFE ROADS

- 28 - Microsleep, the Silent Killer

### FEATURE STORY

- 30 - When will Vehicles Become Entirely Autonomous?

### COMPANY PROFILE

- 32 - i Vision Developing Smart Solutions for Bus & Trucks



28



19

# Specialise in Providing Technology Solutions for Transport Industry



## Benefits

- Real-time vehicle status and video management
- Able to provide video records as evidence
- Extra profits from smart advertising
- Ensure driver and passenger safety
- Prevent vehicle theft and vandalism
- Fast content update through e-Station

### MOD Solution for Bus and Coach



### Telematics Solution for Commercial Vehicles



### Vehicle Tracking Management System



### Mobile Digital Video Recording System



# CONTENTS



40

## BRT GUIDE

33 - An Introduction to the Sunway BRT

## LAUNCHES

34 - NTU And Volvo to Jointly Develop Autonomous Electric Buses in Singapore

## FACILITIES

37 - Proving on Own Grounds

28 - Larkin Sentral Moving Forward with Time

## THOUGHT LEADERS

40 - Qamar and Her SPAD Team's Vision for Safer Buses

## TECH TALK

43 - Hengst Filter: Branded Quality that Pays Off

## SPECIAL BUSES

44 - Go Sightseeing Around Kuala Terengganu In Its Unique "Bas Kite"

## CAPTAIN OF THE MONTH

46 - If She Can, So Can I

48 - NEWS & NOTES



44



46



# At Your Service. At Your Place.

Service right at your doorstep

Want to improve uptime and save cost for your fleet?  
Now our mobile service workshop comes to you.

Right to your doorstep and even on weekends with  
a mobile warehouse of spare parts.

Regardless where you are, we are there for you.

MAN Truck & Bus (M) Sdn. Bhd. (224536-W)  
Lot 4, Jalan Industri 3/2,  
Taman Industri Integrasi Rawang,  
48000 Rawang,  
Selangor Darul Ehsan.

T • 603-6092 6977 F • 603-6092 6966 W • [www.man.com.my](http://www.man.com.my)

**MAN kann.**



# Systems Thinking



It is our first issue of Asian Buses for the year 2018. Starting with a lot of excitement, I can see that this year is poised to be one of growth and optimism. From our discussions with industry leaders, users and operators we also learned that the new mantra of the transportation industry is to be connected.

It is no longer good enough to just have hardware for sale. One would need supporting services. Just as a bus can no longer just run without intelligent systems, we, too, have created a network of services that you can draw on. For me, it is encouraging to see that we are doing the same as big corporate companies. Our events feed into the content of the magazine and our online map is giving you detailed information that will help you run your business. I am also delighted when our readers call me to ask for an opinion on a vehicle or what the economy may look like the rest of the year.

In this issue we are bringing you the latest from SPAD, where we met with their COO to find out what the commission is planning in order to improve the transport industry. There are also very colourful buses we feature, proving that it is not just all dry business, but also a lot of fun working in this sector. Meanwhile, we found a young female bus driver that, encouraged by her family, is making her rounds on the Sunway BRT. She shares with us what makes her job exciting and what motivates her to get up before any of us.

While we try to make the material somewhat entertaining, we also have to tackle the serious issues. In our Safe Roads section, we are looking at Micro Sleep and how it is a dangerous situation to be in when you drive any vehicle. While thinking about these things, I realise that we will still need bus drivers for a long time. In our stories in this issue we deal with autonomous vehicles. While the technology is making huge progress, I think it is safe to say that the jobs will still be there for a while.

A friend asked me why there is a shortage of drivers for buses. My reply is that the industry as a whole isn't promoting itself well enough. Why else would people want to work in offices, where they work from 7am to Midnight every day? Surely, driving a bus with some 50 passengers is not an easy task, but at least you have regular hours, need to be independent and you have plenty of interaction with people. Is it a lack of a career path? Or is the accounting industry just talking nicer about their work? Having been around buses, I can confidently say that any job in this field is a good one, one that rewards in more ways than just money. And with the rise of mobile apps and integrated systems, there are more people needed, performing a wider range of tasks.

And sometimes I wonder if we are not overthinking things. The emergence of mobile tech and apps has allowed us to create new tools, methods and integrated systems. Perhaps, in many cases we have a technical solution to what wasn't a problem? For instance, when I was living in Hong Kong, bus stops had time tables that simply said in which frequency the bus would arrive. Say, in peak hours every 10 minutes. The most you waited was nine minutes and a bit when you just saw the rear lights of the bus when you arrived at the stop. Nowadays, we need an app that tells me exactly when the bus will arrive, what the name of the driver is and how many empty seats there are in the bus that is to arrive? And then we still don't manage to move people swiftly from A to B during rush hours.

Drive Safe and enjoy the ride!

Sincerely yours,

Stefan Pertz  
Editor, Asian Buses Malaysia

# IT NEVER LETS YOU DOWN

Presenting the Volvo B8R range



**We are proud to present the Volvo B8R range**, the successor to the legendary best-selling Volvo B7R range. It was developed with your business in mind, and with the focus on long-term profitability and total cost of ownership. It features our most fuel-efficient engine ever and uptime comes as standard. The quality is built-in built-in from the start, and with our worldwide service network you can rest assured

your vehicles and business are always in good hands. City, school bus or intercity operations? The Volvo B8R range is ready for a range of applications. Making the new B8R range a true moneymaker, and the safer choice. Explore more at [volvobuses.com](http://volvobuses.com)

For sales enquiry, please contact **Vikneswaran Subramaniam** Mobile: +6012 606 6586

## **VOLVO B8R RANGE**

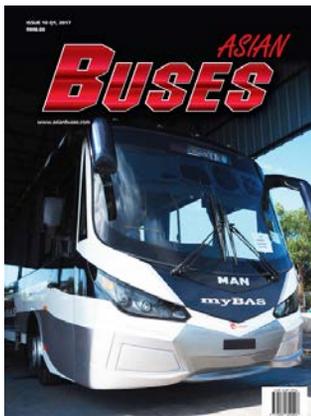
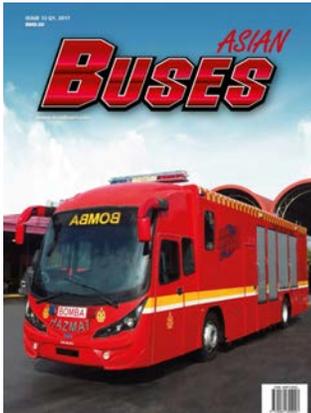
Made to just keep running

Volvo Buses. Driving quality of life



# The Drivers **ASIAN BUSES**

**YOUR GUIDE TO  
ALL THINGS BUS**



**PDF versions  
are available for  
download at  
[www.asianbuses.com](http://www.asianbuses.com)**

## **EDITORIAL**

**EDITORS** Stefan Pertz

**WRITERS** Carol Yeoh, Farezza Hanum Rashid

**GRAPHIC DESIGNER** Tony

**PHOTOGRAPHERS** Floyd Cowan

Tony

Carol Yeoh

Farezza Hanum Rashid

**CONTRIBUTORS** Floyd Cowan

Murralli Thalor

## **ADVERTISING**

Nicole Fong

[Nicole@asiantrucker.com](mailto:Nicole@asiantrucker.com)

## **RESEARCH**

Catherine Rozario

[Catherine@asiantrucker.com](mailto:Catherine@asiantrucker.com)

## **SINGAPORE**

Floyd Cowan

[Floyd@asiantrucker.com](mailto:Floyd@asiantrucker.com)

## **THAILAND**

Songyot Kamontavikun

[Songyot@asiantrucker.com](mailto:Songyot@asiantrucker.com)

## **CIRCULATION, CONTRIBUTIONS and SUBSCRIPTION**

[info@asiantrucker.com](mailto:info@asiantrucker.com)

## **WEBSITE and E-NEWSLETTER**

[www.asianbuses.com](http://www.asianbuses.com)

## **PUBLISHED BY**

Asian Trucker Media Sdn. Bhd. No. 27-1, Block C, Zenith Corporate Park,  
Jalan SS7/26 Kelana Jaya, 47301 Selangor, Malaysia

## **ARTICLES**

Asian Trucker is a registered trademark of Asian Trucker Media Sdn Bhd. All articles submitted for publication become the property of the publisher. The editor reserves the right to adjust any article to confirm with the magazine format.

Asian Buses is a quarterly publication. The publisher will not be responsible for any copyright violation of articles that have been approved by contributing writers. The publisher accepts no responsibility for unsolicited manuscripts, illustrations or photographs.

## **PRINTED IN MALAYSIA**

Times Offset (M) Sdn Bhd Banguan Times Publishing,  
Lot 46, Subang Hi-Tech Industrial Park Batu Tiga 40000 Shah Alam,  
Selangor Darul Ehsan Malaysia

Boost your business with a listing on our new website.  
Find businesses or sell your truck, upload your events or images to the gallery.  
Visit our new website [www.asianbuses.com](http://www.asianbuses.com) to put your company on speed.

**Hengst**<sup>®</sup>  
FILTER



# Work smarter.

## Relying on OE quality.

As a fluid management developer and a strategic supplier for OE, our most demanding customers can be satisfied. We offer outstanding reliability, perfect fit, functionality and long service life. A strong OE brand for all applications since 1958.

### Hengst Asia Pacific

25 Bukit Batok Cres. | #10-10 Elitist | SG 658066 | Tel.: +65 6818 2880  
info@hengst.de | www.facebook.com/HengstAPAC



[www.hengst.com](http://www.hengst.com)



# Land Public Transport at the Forefront of Transformation

*The expansion of the Land Public Transport network both in Greater Kuala Lumpur/Klang Valley and across Malaysia is on track and continues to make positive impact for Malaysians.*

Overall average daily ridership of public transport in GKL/KV (combination of rail and bus) rose from 1 162 717 trips in 2016 to 1 206 111 in 2017, up by 3.7 percent. Urban rail recorded a 7.5 percent increase in average daily rail ridership, from 645 601 in 2016 to 694 057 in 2017. This can be attributed to the full opening of the 51km MRT Line 1 on July 17, 2017.

## **Making Buses More Relevant**

Besides rail, an integral part of the public transport system is the improved bus network both in GKL/KV and cities across Malaysia. In terms of bus, 300 MRT feeder buses have been added to more than 1 000 stage bus in GKL/KV under the bus service enhancement programme. Another 300 MRT feeder buses are expected to support MRT2 when it is in service to improve first and last mile connectivity for commuters.

Reception of the myBAS implemented under the Stage Bus Transformation Project (SBST) services continue to be encouraging, with overall ridership up in all places. myBAS Kangar, Seremban, and Ipoh all recorded increases ranging from 3.8 percent to 64 percent. Meanwhile, Kuala Terengganu is the first city in the country to incorporate the use of electric buses under the myBAS service which began operations on 1st March, 2018. Next on the cards, is the implementation of myBAS Johor Bahru which is slated for Quarter 2, 2018 which will also see the rollout of electric vehicles.

2017 also saw the amendments to the Land Public Transport Act (2010) and the Commercial Vehicle Licensing Board approved by the

Dewan Rakyat, paving the way for SPAD to regulate e-hailing. In a move to create a new breed of competitive taxi entrepreneurs who embrace technology, the Commission via the Taxi Transformation Programme (TITP) awarded 1 200 eligible taxi drivers with individual taxi permits. A total of 581 eligible drivers also received a Government grant of RM5 000 to buy their own new cars.

## **Commuter Satisfaction with Land Public Transportation in Malaysia on Uptrend**

The Customer Satisfaction Index (CSI) study commissioned by SPAD found that overall CSI for public transport went up from 84 percent (2016) to 90 percent (2017). The percentage of respondents who rated it as "very satisfied" also increased from 14 percent (2016) to 31 percent, while the likelihood of users to continue using public transport also rose from 78% (2016) to 81 percent.

The Land Public Transport Commission (SPAD) will continue to pay equal attention to raising safety and service standards of bus and rail operators by nurturing and instilling a culture of safety. 2019 will see the creation of a biometric control system for express buses to minimise accidents arising from human errors and fatigue. The Commission will also implement a comprehensive safety management system to ensure that rail operators adhere to the highest safety standards. ■

Corporate Sponsor



An initiative jointly organised by



In association with



# ARC

Asian Retread  
Conference 2018



## BETTER, FASTER, CHEAPER

Asia's path-breaking conference on tyre retreading industry returns to Kuala Lumpur, Malaysia, with greater opportunities for knowledge sharing and networking.

[www.asianretreadconference.com](http://www.asianretreadconference.com)

October 2 & 3, 2018  
Sime Darby Convention Centre  
Kuala Lumpur, Malaysia

Contact: Antony Powath | Email: [asp@abm.net.in](mailto:asp@abm.net.in) | Mobile: +91 9833 901586  
Praveen Manchal | Email: [pm@abm.net.in](mailto:pm@abm.net.in) | Mobile: +91-9867012829 | Tel: +91-22-26400829

Co-Sponsors:



Supporter:

First Day Lunch Sponsor:

Lanyard Sponsor:

Associates:

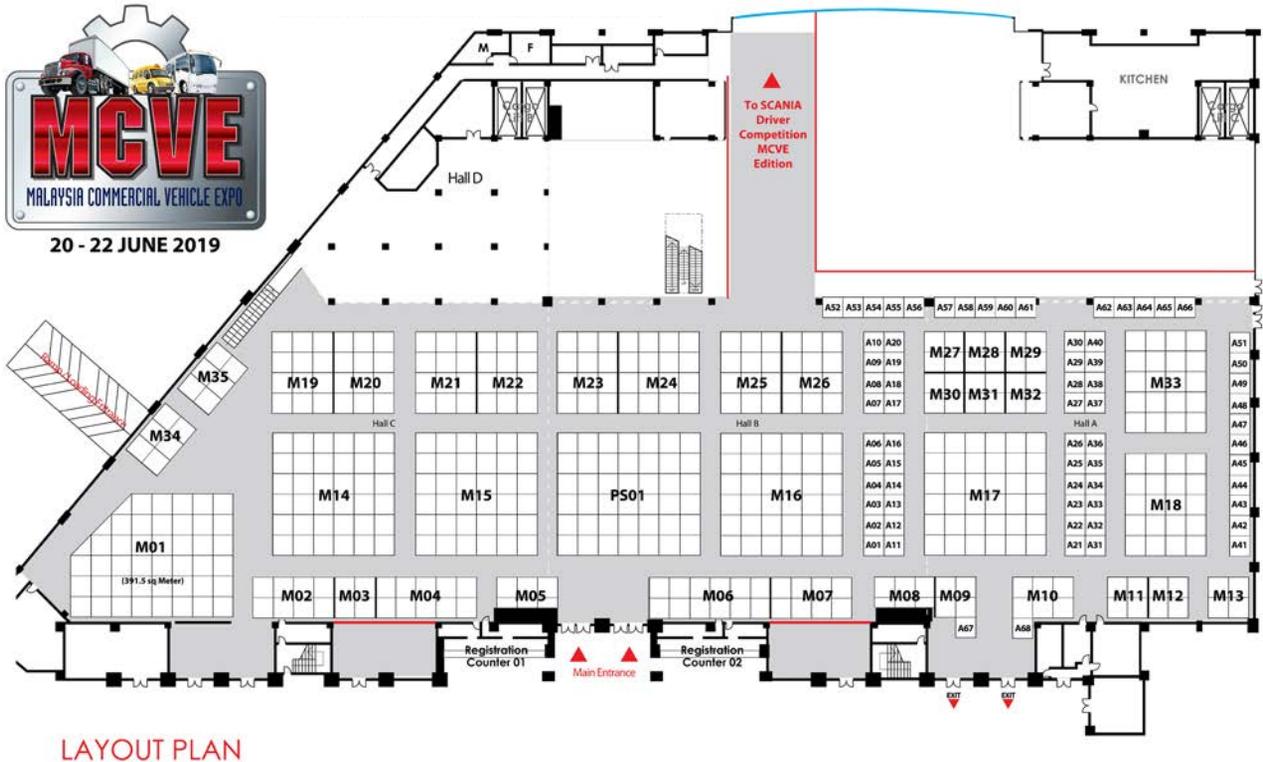


Media Partners:



# MCVE 2019 Sees High Demand

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



LAYOUT PLAN

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 75 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. With over 8 000 square meters of indoor space, this is the largest exhibition in South East Asia, dedicated to commercial vehicles.

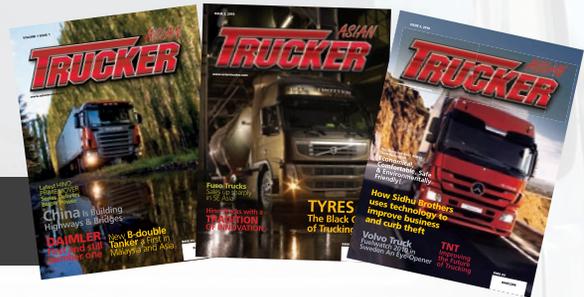
Making a comeback as well at the event is the Scania Driver Competition. This hugely popular outdoor segment saw big crowds during the past exhibitions with unfortunate

drivers being turned away due to high demand. Scania is a key exhibitor, utilising the event with booth space, driver competition and their own lounge for delegates to relax and have in-depth conversations with the brand's representatives.

"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. Visitors can expect a multi-faceted program, as has been done in the past three exhibitions.

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](http://www.mcve.com.my) and the Asian Trucker team stands ready to consult interested parties regarding their participation. 

# ASIAN TRUCKER



## SUBSCRIPTION FORM

### Personal/Company details

Mr/Mrs/Mdm/Ms : .....

New I/C No : .....

Company : .....

Address : .....

.....

Tel no (O):..... (HP:.....

Email : .....

I hereby enclose RM Cheque.....

being made payable to Asian Trucker Media Sdn Bhd

4 issues RM50

6 issues RM70

Mail/fax this form to:

**Asian Trucker Media Sdn Bhd (902834-K)**  
**Lot No. 8-2 (LEVEL 2), Medan Klang Lama 28,**  
**Jalan Klang Lama, 58000 Kuala Lumpur**

**Tel : 03 7770 8399**



## Scania's Daniel Tan sets a New Direction

*Four months into his new job and new industry, Daniel Tan, Sales Director of Scania Southeast Asia, met with Stefan Pertz of Asian Trucker to discuss what new strategies he has devised for the Swedish brand.*

**D**rawing on decades of experience in the automotive industry, Daniel Tan, Sales Director for Scania Southeast Asia in an exclusive interview gives us an update on where Scania is headed. He draws on extensive knowledge that he has gained in the automotive sector, where he worked at headquarter level as well as handling wholesale and retail. Tan now applies his skills to his new job, which he took on late last year.

**AT:** Taking the term "Director" quite literally, we would want to know what the direction would be you have in mind for the sales team.

**DT:** Times are changing. And with that, we too need to change and adapt. Traditionally, truck makers would be producing and selling chassis. During

the process of selling, prices should not be the key driver for purchasers to make a decision. Today, we still sell chassis, but we are competing on the grounds of offering a better overall solution compared to our competitors. We are no longer just talking about discounts, but about over cost of operation, fuel savings and uptime. With the integration of connectivity, we can also help owners to maximise the use of their vehicles, thus improving profits and reducing fuel cost. In this modern area, the complete package is now more than just the hardware.

In parallel, we are now seeing that we can make our sales team much more proactive. When working with customers, the model of sales staff being mere order takers has to be retired. We move things into an IT System now. The reports we are generating tells us what the sales funnel looks like at any give time. From here, we can see what are the conversion rates and identify areas where we need to improve the skills of our team. What is crucial is that we ensure that our sales team is selling Scania's unique values, which is something our customers expect from us.

**AT:** Fuel efficiency is key to success in this industry. How do you evaluate Scania's performance in this area?

**DT:** Generally, it is the customer that gives us this feedback. While we have a lot of data in Europe, in Malaysia we depend on the users to share their experience with us. Thanks to the digital solutions we have, we can now accurately pinpoint where the issues are. For instance, I have a client that was able to reduce idling by a lot, thanks to our Fleet Management System. One particular driver would sometimes have the engine running for 72 hours, non-stop. This means, even during layovers or when sleeping, the engine would be running.

While some may argue that we are premium priced, we also have a lot of customers that recognise the fact that our uptime is far superior to others.

If we want to convert any customer to Scania, we have to lead with fuel efficiency.

**AT:** Nowadays, fuel is more than Diesel and Scania is at the forefront of developments when it comes to alternative fuels. What are your thoughts on this?

**DT:** Before we discuss anything else, let's focus on gas. We have just launched a gas-powered engine, which has over 400 horsepower, just like a Diesel engine. It is such a good product that we are completely overbooked. It is actually a Euro 6 compliant engine and we could sell it here, given that there is capacity. One problem though is the lack of infrastructure here. Having a solution is one thing, being able to operate another. What is interesting is to see what we can do with waste to energy as many such solution produce gas, which can then be used for transportation.

Electrification has similar issues as we need to think about the vehicle as well as the infrastructure. It cannot be good enough to have a vehicle that runs for an hour and then you have to charge it for half a day in a far away location. Another aspect is the source of the energy for these vehicles. While it is surely a benefit to not pollute cities, the energy needed for these buses and trucks still needs to be produced somewhere. And that production of energy is something that rests in the hands of governments. Depending on their approach, we will need to match our products accordingly, too.

While we are working on other solutions too, Diesel, in my view, will still remain a mainstay of the industry for a while though until legislation encourages alternative fuels.

**AT:** How are Scania vehicles getting smarter and safer?

**DT:** Naturally, you have certain expectations when you enter a new industry. Having worked a lot in the passenger car segment, I was overwhelmed to see how far advanced trucks actually are. The New Generation Scania, has "Active Prediction". Such

packages will make the truck smarter and safer at the same time. In certain markets, we also offer side-airbags, which makes us the only ones outside the US to do so.

Besides that, we are offering systems like lane departure warning and Automatic Emergency Braking. However, one of the key issues is often not mentioned. And that is the driver-centric approach we are taking. If a bus or truck is designed in an ergonomic better way, it not only makes it smarter, but also safer. If you reduce the stress put on the driver, they will naturally feel less fatigue. Being more relaxed means you can be more attentive.

Involving both, drivers and owners, we are able to gather feedback on their specific requirements. For instance, out here, an air conditioning unit is something that the drivers really appreciate when they sleep in the cabin. However, the owners will not want to have an idling engine. To combine these two requests, we can add auxiliary batteries that will power the air conditioning only, ensuring that the main battery is strong enough in the morning to start the vehicle while saving fuel. There are many such examples where we look at how to make our vehicles more practical to use.

The motivation for adding these features and to tweak the vehicles is based on the foundation of the "Respect for the Individual". ■





## MaraLiner Gets Six New MAN Buses

*After last year's purchase of 40 MAN buses, MaraLiner gets six more units.*

Six MAN buses were handed over to MaraLiner at Kompleks Industri Makanan MARA (KIMAR) recently. Present at the ceremony were MARA Transport Industry Department Director Mohammad Mohd Yatim, MaraLiner Sdn Bhd Chief Operating Officer Abdul Wahab Mustafa and MAN Truck and Bus (M) Sdn Bhd Sales and Marketing General Manager Jerome Wong.

The 10 500-CC RR3 19.350 buses are said to have the best fuel consumption where 1 litre could go as far as 4.5 kilometres. These buses were installed with speed limiters where they could drive only up to 90 km/h, as regulated by the Public Road Transport Commission (SPAD). According to MAN Truck and Bus Sales Representative, Ahmad Safuan Jalaluddin, these buses will not go beyond that speed even if accelerated or going downhill. They are also equipped with five stages of retarders each.

As an extra convenience to the driver, the steering wheel is multifunctional where there are buttons to control the audio and so on. The bodybuilders of these six buses is RTG Intech Corporation (M) Sdn Bhd. The cost of this fleet was approximately RM3.6 million.



"The buses also have the 'easy start' feature, which is like the hill assist feature in today's modern cars. When the bus is stopped on an uphill road, the driver has three seconds to go from neutral to drive. Within those three seconds, the bus will not move," Ahmad Safuan told Asian Buses when met at the handover ceremony. The buses are also equipped with the anti-lock braking system (ABS). The ceremony started with a prayer (solat hajat) before proceeding with the handover, a drive around the KIMAR compound in one of the buses and ended with lunch.

These new two-plus-one-seat buses are also lightweight with the Kerb Weight of 11 tonnes and 18 tonnes of Gross Vehicle Weight (GVW) which allows for low fuel consumption and easy maintenance. Each seat is equipped with a USB charging unit to ensure continuous power for the passengers' mobile devices.

The total purchase of MAN buses by MARA in 2017 was 40 units consisting of 12 units of MAN 19.350 RR3 (single deck) and 28 units of MAN 24.460 R40 (double deck). ■



# 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 tyre 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 tyre industry chain. It welcomes the visitors to showcase and demonstrate their finished tire products, tyre accessories & wheels and rubber processing equipment. At CTF, buyers and suppliers from China and other countries gather under one roof.

## BUSWORLD TURKEY 2018

Date : 19 April 2018 – 21 April 2018  
 Venue : Fuar Izmir Hall B, Izmir - Turkey  
 Contact Info: +90 212 216 40 10 / info@hkf-fairs.com  
 Details : BUSWORLD was first organized in Belgium and it has achieved an international recognition as being the oldest and most respected trade show for the bus industry. BUSWORLD TURKEY 2018 will bring the international bus and coach industry and sub-industry sectors together for the 7th time in Turkey. This will be a great opportunity to generate new businesses and build up existing relationships particularly for Turkey and its neighbouring countries.

## 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.

## CHINA (GUANGRAO) INTERNATIONAL RUBBER TIRE & AUTO ACCESSORY EXPO

Date : 15 May 2018 – 17 May 2018  
 Venue : Guangrao International Exhibition Center, Shandong  
 Contact Info: +86 – 182 – 1068 4133 / richard@wintrustexpo.com  
 Details : Key products to be presented at ChinaGRTAE 2018:

- Tire products (all kinds of vehicle tires, wheel rim, tire manufacturing and design)
- Wheel products (steel wheel, aluminium wheel, products material)
- Rubber tire equipment (complete sets of equipment for tire manufacturing and testing)
- Tire retreading equipment & material (Tire repair materials, repair mold)
- Rubber raw materials (Nature rubber, synthetic rubber, reclaimed rubber)
- Auto Accessory (System of chassis, braking, driving, steering, body and parts)
- Auto maintenance equipment (Repair equipment, maintenance equipment)
- Others (Lubrication oil, auto parts industry professional journals and magazines)

## 21ST AUTOEXPO AFRICA 2018

Date : 17 May 2018 – 19 May 2018  
 Venue : KICC, Nairobi  
 Contact Info: +971 – 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

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 percent 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 percent 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). 





# Composite Of Technology And Innovation Helps MG Mould E3

**O**ur contributor T Murralli took a tour at a high-tech company in India and found that a new generation of commercial vehicles is on the brink of being released. Here is what he has to report from inside MG Group and Greaves.

Technology and Innovation form the core of the Mumbai-based MG Group's growth strategy. The group aims to meet India's growing demand for transport, automobiles, alternate energy, electronics, healthcare and composites in ways that are economic, environment-friendly and socially responsible. MG Composites, part of the group, has designed and developed a body of advanced composites for an electric three-wheeler. To be hauled by Greaves Cotton's electric powertrain it is named 'E3'. The prototype will be showcased at the Auto Expo for the vehicle manufacturers operating in the three-wheeler segment to view, and depending on their need E3 will be manufactured, Anil M Kamat, Managing Director of MG Group, told AutoParts





Asia. The logo of E3 (electric three-wheeler) is designed by MG in such a way that when looked at together it appears to be a 'Butterfly' signifying nature and clean environment.

Composites are materials made from two or more constituents with significantly different physical or chemical properties that in combination produce an entirely different material that is stronger, lighter and cheaper than metals. The individual properties remain distinct within the finished structure. Similarly, the partners of E3, MG Composites and Greaves, remain distinct for the finished vehicle.

"We are jointly pitching for the market with the concept, which demonstrates Greaves as a driveline system supplier and MG Composites as an application builder and designer. We are giving our customers the option to take either the body or electric powertrain or both. If a customer wants the vehicle as a whole, we can offer. We are yet to take a call on where the integration of the powertrain into the composite shell or the body, will take place. Most probably it will be at our composites plant in Zaheerabad in Telegana State," he said.

MG Group decided to manufacture a commercial vehicle since "we have been on the lookout for new challenges and opportunities in the industry segment we are present. Design and composite materials being our core areas we were keen to combine the two to put forward a suitable mobility solution in the commercial vehicle segment. The three-wheeler auto segment being one of the product variants in this segment that MG had never attempted, we felt the time was ripe to unveil E3. It is a bold step to change from the traditional metal body to composites as it may not be easy to infuse it into the market. Several countries, especially in the ASEAN region, have begun to accept vehicles of composites for the last mile connectivity. E3 is an indigenously designed and 'Made in India' product, having high performance, low cost of ownership and zero emission. It is also stylish, and futuristic," Kamat said.

MG Group, India's largest privately-owned bus building enterprise, has two companies: MG Automotives Private Limited in Zaheerabad, and MG Automotives (Bus & Coach) Private Limited in Belgaum, Karnataka. They have an installed annual capacity of 16 500 buses. Since its



entry into this business in 1996, the group has manufactured over one lakh buses, both for the domestic and export markets.

The group has been one of the leading high volume low-cost manufacturers for the bus building requirements of the Indian and multi-national OEMs. The company established West & Deccan in 2001 to strengthen its design and engineering capabilities. It has an experienced team of artists, industrial designers, structural design engineers, and vehicle drive-line integrators. The team gives attention to the design aesthetics, and style vehicles to be viable and efficient. State-of-the-art facilities at West & Deccan besides, hardware and software packages help in detailed styling, design and analysis while representing the real vehicle to the best extent possible.

The design team at West & Deccan has the capabilities for concept and styling of virtual prototypes, manufacturing drawings, non-linear explicit analysis, crash analysis, rollover analysis, structural optimisation, design & analysis of mechanisms, bus code study and analysis, fixture design and support, interior designing and homologation support. The team is being expanded.

### **MG Composites**

The composite industry globally is worth about USD 36 billion while in India it is just USD 450 million. However, it is set to grow at an annual growth rate of 25 percent in the next five years. Advanced composites can take over many areas replacing metal.

Composites play a big role in the automotive industry. With the increasing need for composites in the Indian bus industry, and to be a total bus solutions provider, the group company established MG Composites in 2014. "We started with a composite, commonly known as FRP (fibre reinforced polymers) in a small way meeting some of our requirements. This was a trial to understand the intricacies of designing and manufacturing FRP parts. Over these four years, we have gained knowledge in the art of designing composite parts and their mass manufacturing," he said.

MG Composites has a dedicated design, pattern and mould-making shop and manufacturing facility. It has leveraged an advanced technology for E3 composite body with lighter yet stronger components that reduce the overall weight of the vehicle.

"Vacuum Press Infusion – VPI, a closed moulding infusion technology is the latest and most advanced in composites manufacturing. The VPI process provides all the environmental advantages of a closed mould process for making high quality composite parts with optimised fibre-to-resin ratio giving higher strength and stiffness.



Consistent laminate with great process control, less human errors, smooth outer and inner surfaces are its other advantages. It is also environment-friendly as there is no styrene emission," Kamat said.

"Composites are fast replacing other conventional materials across various industries mainly aerospace, defence, railways, maritime and automotive. MG Composites was established to further build on its advanced composites engineering and manufacturing capabilities. We have recently established a world class R&D and innovation 'Centre of Excellence' to strengthen our overall mission and vision to be the leading composites solutions provider in India," he said.

The Centre of Excellence has advanced equipment for testing properties such as tensile strength, yield, flexural or bend strength, compression, elongation / elasticity, fibre content, density, viscosity and gloss. It has a CNC machining centre to manufacture patterns in precise dimensions and accurate contours, a tool manufacturing facility adhering to latest industry trends, and the arrangement for the first article inspection and sign-off for different types of fabrics, resins and other core materials.

MG Composites is a technology company offering complete solutions in engineered composites and composite parts. It has a mass manufacturing facility equipped with pattern and mould making centres and full-fledged tool room for design and manufacture of required tools. The company has a panel of international experts as technical partners: Alan Harper, Founder of Alan Harper Composites, the UK, and T K Lim, Founder of Sift Centre, Malaysia.

MG Group companies use CAE (Computer Aided Engineering) that follows advanced Mathematics such as Finite Element Analysis (FEA) to calculate the stresses and deflections in the body structure of a bus. MG Composites in collaboration with its technical partners, has delivered even the most challenging projects for the bus and coach industry.



"In recent years we have co-operated with MAN, Scania, Daimler and more recently with Goldstone BYD, for electric buses. Over the years we have made various applications across platforms for commercial vehicle industries. At West & Deccan we are always on the lookout for new opportunities to flex our design and engineering capabilities and strength," he said.

The company has an installed production capacity of 5 000 tons a year with 40 percent additional capacity for new products. "With our current capacity we have the ability to ramp up for 200 composite bodies for E3 per month. In case of further demand from our partners we can ramp up production to meet the market requirements in planned phases," Kamat said.

### Big Step

MG Composites, envisioning itself to be the largest players in this segment in India, while continuing to cater to its bus business, is in the process of supplying to the aerospace, defence, railways, commercial vehicles and many more industries which need advanced composites. It has been manufacturing basic composites in three mm thickness for buses and commercial vehicles as skin parts to clad the metal structure for a better facia. The company has moved up to 'advanced composites,' which has higher tensile strength to be evolved to an integrated design monocoque body like that of E3.

E3 is a concept vehicle for the last mile connectivity for passenger travel, the body and packaging of which is designed by West & Deccan and engineered by MG Composites. The electric powertrain is powered by Greaves Cotton, a leading fuel agnostic power train solutions and services provider in the last mile mobility in India.

When viewed from the rear, the monocoque body of E3 appears to be a compact hatch or a compact SUV. Its distinct wheel arches that appear to be that of a sports car, add glamour to the vehicle. The jelly bean or egg-shaped body has the necessary ingredients to minimise drag and enhance efficiency. The wide opening on both sides allows free wind flow and makes entry and exit easier. Though the exact dimensions are yet to be revealed the vehicle appears to be slightly longer than the passenger version of the three-wheelers manufactured by the OEMs in the country. E3 does not have B-pillar from the design concept, however, there is an option to have it from the partition between the driver and the passenger compartments, till the roof. The base plate for the driver seat and passenger seat are also part of the integrated structure.

Asked why the company zeroed in on E3, Kamat said "transport accounts for roughly one-third of the world's energy consumption. Replacing the current mobility, that allows CO2 emission, with renewable energy is the sustainable solution for the future of urban transport. The automotive industry is undergoing a major disruption through electrification of vehicles. The current eco-system is radically progressing towards electrification and realisation of the Government's aggressive approach to electrify all new vehicles by 2030, is pushing all manufacturers in this direction. In India, the three-wheeler segment has a limited last mile connectivity with short haul ranging anywhere between 100 and 120 km on an average per day. E3 fits perfectly in that space. Moreover, the batteries available today have a limited range of operation and hence E3 is a good fit as the three-wheeler operation can be performed in one full charge."



### Why Greaves

MG is an application designer and builder with specific expertise in the field of composites. Greaves is an expert and a leading player in the three-wheeler engines segment. "The E3 is a concept which has been developed to demonstrate our respective strengths in these areas of expertise. It is designed to prove our capabilities and for our OEM partners in the electric three-wheeler segment," Kamat said.

Greaves Cotton Limited is a Rs1 800- crore engineering company in India with core competencies in diesel/ petrol engines, farm equipment, gensets, construction equipment and three-wheelers segment, catering to a few OEMs in India. The company has diesel, petrol, CNG and now electric three-wheeler engines. It is a fuel-agnostic, full range engine solution provider. "Being one of the preferred and the largest suppliers in this segment, it was critical for MG to partner with Greaves in developing the concept of E3," he said.

"We have completely replaced metal with composites. For three-wheelers, more than the acquisition cost, the cost of ownership determines the business sense for the end user, often an entrepreneur. Therefore, the idea was to reduce the total cost of

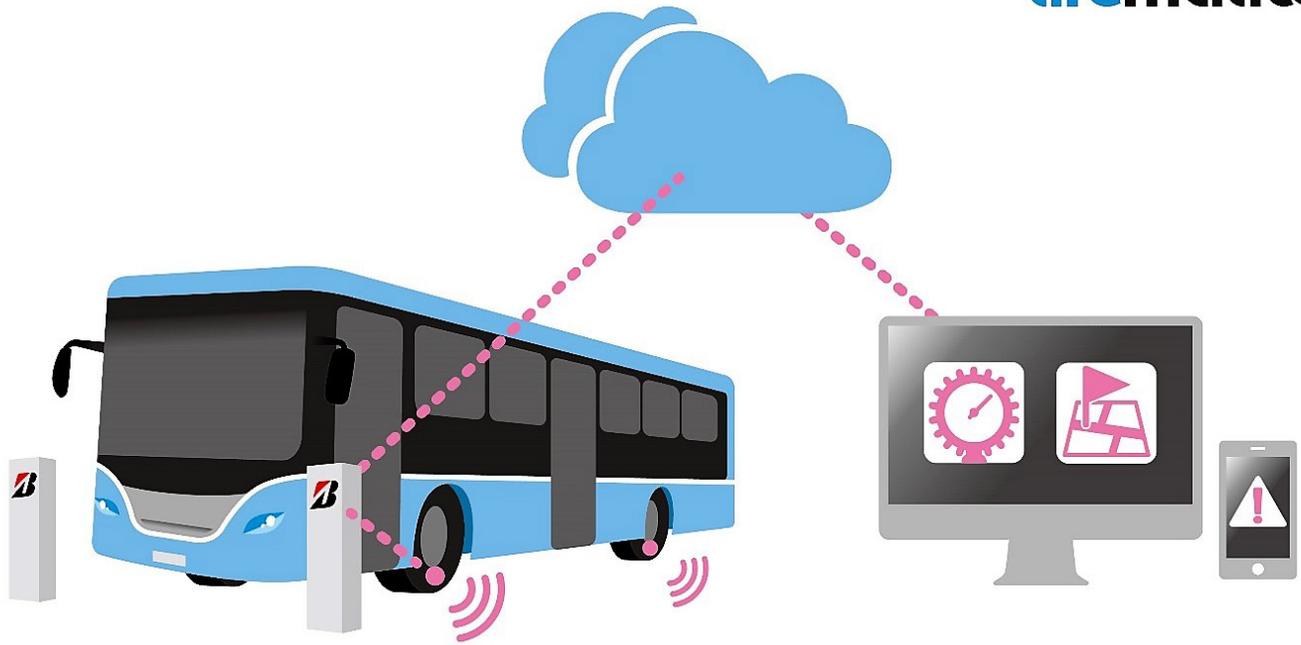
ownership by minimising the running cost, being electric-driven, it is the lowest. Made of advanced composites, the body is stronger and lighter, and it increases the distance covered and cut the operating cost. The tooling cost for composites is far lower than that of the metal body. As the cost of tooling can be recovered in smaller volume, it is possible to give a facelift or change models at short intervals," he said.

The E3 body is corrosion-proof and amenable to styling due to the flexibility of composites. It operates silently with minimum vibration and harshness. The driver and passengers have many conveniences such as LED saloon light for good visibility and ambience, multifunctional mobile app configuration for a variety of features such as battery life, temperature, navigation, ergonomically designed passenger seats and widescreen road view.

With a focused approach in partnerships and collaborations with its technical partners and skilled engineers, the prototype was built in 45 days. With the state-of-the-art facility and design engineering capabilities the company was able to accelerate the pace of development and achieve maximum precision, quality and conformity during the proto build gates at each phase of the development. "Having the R&D centre at MG Composites was critical to achieving our goals in a very short time. The synergy between the group companies, West & Deccan and MG Composites, was the winning combination to bring E3 to life," Kamat said.

About the vendors developed for this project and the list of components outsourced, he said, "For the prototype we had vendors only for the most critical parts. We relied on the off-the-shelf accessories and parts available in the market. However, if we decide to produce E3s with an OEM partner we will build the required vendor base." (APA) 





# 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." ■

# Microsleep, the Silent Killer

*It is too seldom talked about, and often taken lightly, but we need to take microsleep seriously, Farezza Hanum Rashid writes.*



In the transportation industry like freight and express bus, business runs 24/7. Loads need to be transported throughout the day, which means that trailers are on the roads throughout the day. And night. While for express buses, there are overnight trips carrying around 40 passengers across the country.

For this to happen, drivers work in shifts and normally, shifts rotate. Ali could be working on the morning shift for three days straight and replace Muthu's afternoon shift the next day while the latter takes a day off, and this disrupts Ali's sleeping pattern. If this occurs for a long period of time, shift rotations could cause circadian rhythm problems. According to [sleepfoundation.org](http://sleepfoundation.org), circadian rhythm is a 24-hour internal clock that is running in the background of our brain and cycles between sleepiness and alertness at regular intervals. It is also known as the sleep/wake cycle.

Shift workers like truck and bus drivers have a higher risk of circadian rhythm disorders. Interrupting a normal rhythm can cause sleep deprivation, fatigue, and daytime sleepiness. Those experiencing this are also at risk of making judgment errors, problems with alertness, and difficulty focusing.

A disrupted circadian rhythm is just one of the types or causes of microsleep. Basically, microsleep is your brains shutting off for just a few seconds even when your eyes are open, and your hands are on the wheel. Most people do not realise that a part of the brain can be asleep while another part is awake. So, you may be able to keep your foot full throttle on the accelerator and even negotiate certain turns and yet not have full judgment ability. Only a second of microsleep could be fatal.

Another type of microsleep is highway hypnosis, a trance-like state that drivers may experience while being behind the wheel for extended periods. Here, drivers are awake and continue to perform driving tasks but have little memory of their actions and of time elapsing. This leads to a not-asleep-but-not-awake state that is like being hypnotised.

There is also the Sopite Syndrome where those experiencing it are prone to drowsiness in transportation settings. Symptoms can be worsened by sleep deprivation and sleep disorders, as well as by physical fatigue.

A petroleum tanker driver, Kaspul Anwar Abdul Karim from Penang, once told me that falling into microsleep is one of drivers' biggest on-the-job fears. "We have to force ourselves to sleep and get enough rest to avoid fatigue. We are mostly worried of falling into microsleep where we would drive sub-consciously. Before we know it, we have already reached our destination without being aware of the whole driving process and our environment," he said.

Kaspul said in the company where he works, drivers must fill up the sleep declaration forms. "Drivers need to have enough sleep before they drive. If they had less than six hours of sleep, they will be issued a stop-work order," he added.

However, there are many drivers out there who purposely lie in their forms and manipulate the log books to get more miles in the day. In the United States, doctors have warned that losing sleep for one night is the equivalent of being legally drunk, and experts say the best indicator that you are about to fall asleep at the wheel is having it happen.

There are many reports of fatal crashes caused by sleeping drivers around the world. On July 17, 2012, a New Zealander trucker was killed when his truck crashed at about 3.30am. He had been working since 4.30pm and the coroner ruled he likely crashed due to fatigue when he drove straight into a building. In June 2014, microsleeep came under the spotlight in the US when a Wal-Mart truck hit a car, injuring comedian Tracy Morgan and killing his friend. The truck driver had been awake more than 24 hours at the time of the crash.

A 2017 survey showed that 9 percent of Australian drivers admitted to having a microsleeep behind the wheel. In January this year, a 21-year-old man was killed in Sheffield, England. He fell into microsleeep when he hit a delivery van.

Meanwhile in Malaysia, news of lorry and bus crashes in the wee hours of the morning are nothing new. Too many lives were lost unnecessarily. Drivers speed on highways to stay awake, they push themselves for the next paycheque and to keep their jobs.

Among the most recent crashes in the country included a bus travelling from Johor Bahru to Kuala Lumpur in December 2016 where 14 were killed and 16 others injured when it fell off a cliff. In October 2017, eight people died in a 6am crash in Juru while a month later, 19 were injured in a 5am accident on the PLUS highway. Although police cited that the drivers had "lost control," we should not rule out microsleeep considering the times that these crashes took place. Transport Minister Datuk Seri Liow Tiong Lai was reported as saying that it was time to address proposals to install more safety features in buses since serious accidents continued to happen despite enforcement and education.

Rio Tinto, a mining company in London and Australia, has adopted the use of Smart Cap, a baseball hat that can measure brainwaves and let drivers know how fatigue they are. Meanwhile American company Caterpillar Safety Services, in 2014, had come up with the Cat Smartband, a simple Fitbit-like device that feeds data into a software programme that can tell when a driver is suffering from a lack of sleep and the fatigue that results. Some customers also use the Smartband with a complimentary driver safety system (DSS), which combines dash cams trained on the drivers and sensors on the trucks that monitor hard braking, swerves and other anomalies. With

these technologies already available for several years, I think it is high time that the Malaysian government considers similar devices not only for the transportation industry but also for consumer vehicles as well.

Many drivers have felt themselves nodding off, then jolt awake and get a false sense of security that they are good to drive once their adrenaline kicks in, but they are likely to nod off again within minutes.



Here are tips on how to avoid the dangers of falling asleep at the wheel:

- Ensure you are well rested and feeling fit and healthy before you set off.
- Take regular rest breaks when driving on a long stretch of a highway. Stop at least every two hours and take a break before the drowsiness sets in.
- Avoid driving between the two peak times for sleepiness, between 3am and 5am and between 2pm and 4pm.
- Pull over for a break or a nap in a safe place. Plan an overnight stop, if necessary. There are hotels at our R&R stops.
- Swap drivers if you can.
- Stop for a coffee if it is a short drive however caffeine will not work for everyone and is only effective against fatigue on short drives.
- If you are on medication, seek advice from a doctor or pharmacist as to whether you should be driving or not. 🚫





# When will Vehicles Become Entirely Autonomous?

*The Second Autonomous Vehicles Conference held in Singapore presented over 20 speakers who shared their views on the current level of development and where they expect it to be in years to come.*

At the Autonomous Vehicles Conference 2018, held in Singapore January 30 – 31, speakers talked about the reasons for developing automobiles that can drive themselves, what the challenges are and how soon we can expect to overcome those challenges.

Speakers pointed out that human error causes 70-90 percent of road accidents.

“Most people agree,” Associate Professor Dr Hussein Dia of the Centre for Sustainable Infrastructure, Swinburne University of Technology, stated, “that self-driving vehicles can have a positive impact on road safety. Nearly 1.2 million people die in traffic crashes 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.

“These crashes cost more than \$500 billion a year. Many could be avoided by using AVs. Driven by Artificial Intelligence, these vehicles will not make errors of judgement the way humans do. They will not drink and drive. They will not fall asleep behind the wheel. And they will not get distracted by playing Pokemon Go!”

Safety was a concern of Andrew Mehaffey, Director New South Wales 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. Five people in two cars died. The road surface was good, the weather was good. The crash was caused by human factors that wouldn’t have happened in an AV. The move to AVs can’t happen soon enough.”

Asrulnizam Addrus, Transportation Technology Division, Malaysian Investment Development Authority asked, “Why are Autonomous Vehicles needed? Road crashes cost Malaysia’s economy RM9 billion a year.”

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 fully-autonomous cars roll 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. At the same time, vehicle trials are being conducted globally for autonomous cars, trucks and trains and that bodes well for the industry.”

"Autonomous driving is at the cusp of transforming and redefining the boundaries of the automotive industry," Peter Kelly, Managing Director of LMC Automotive 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. The holistic solution could be hardest of all. Full autonomy."

Vivek Vaidya, Vice President, Frost & Sullivan said, "AVs are unlikely to pop up, but come into the mainstream gradually. 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. The car will learn your preferences. At Level 4, which we will reach about 2025, the car will act as a personal assistant. Your car will learn from other cars. Machine to machine is going to be the backbone of Artificial Learning. AI cars are expected to surpass human intelligence beyond 2025. They will drive better than humans."



Paul Lothian Director Cyber KPMG Singapore agreed: "Automobiles have evolved into highly complex computers on wheels. Ensuring robust cyber security is 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. To enable safe adoption of AVs, the core technology must be secured at all times."

Mahesh Shinde, GM, HEAD - ERC (Indoor testing) Tata Motors noted: "Development in electronics is necessary, such as sensors that give high accuracy. In the tropics it suddenly starts raining heavily. If the sensor doesn't give you the images required, then you have a problem."

Dr Aybike Ongel, Principal Investigator of Design for Individual Mobility Vehicles & Services TUM-CREATE said Singapore's goal is to have 75 percent of trips during peak periods be on public transport by 2030. "There is a gap between MRT and buses," she stated. "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 roads.

Lars-Erik Forsbergh, Managing Director, Volvo Trucks Hub, SE Asia spoke about how autonomous features are currently being used in Volvo vehicles. Since 2008 Volvo has implemented many automated systems such as Driver Alert Support and Collision Warning with Emergency Braking. These safety products are in serial development. He noted: "The truck can do a 365° scan around the truck. It is an assistant driver."

Pang Mei Yee, DHL Vice President of Innovation, Solutions Delivery & Service Management – Asia Pacific agreed AVs are already here: "Self-driving vehicles in warehouses have the ability not just to transport goods, but to combine other process steps such as loading and unloading in order to increase efficiency."

Koen Cardon, CEO, Kateon Natie Singapore, related his experience about 'Launching Singapore's First Autonomous Truck.' "We went to work with an SMU team. The students looked for eight months at what technologies are out there. We knew what we wanted. Our customers were the hardest to convince. 'Could we guarantee it won't be a safety hazard?' We responded that we are going to make it safer than existing operations. We are not saying this is 100 percent fool proof. But to date, with over 85 000 moves per day, there has been no lost time. The technology is there."

Alexander Mastrovito, Head of Sustainable Transport Solutions, Scania Asia & Oceania noted: "Autonomous Vehicles are only part of Sustainable Transportation. 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." 



# i Vision Developing Smart Solutions for Bus & Truck

*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 customised 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 harmonise 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 develop and so not only keeps up with rapidly improving products and technology, but contribute to the growth of this industry. ■

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 of 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 customising 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."



be seen to be using the BRT service as the bus runs around a few educational institutions.

### Environmental Friendly

In 2014, BYD won the bid to supply 15 new battery-run electric bus to Prasarana Malaysia. These electric buses use a lithium iron phosphate battery which is fire-safe and non-toxic. The batteries contain no corrosive materials, toxic electrolytes and heavy metals. Furthermore, the battery can be completely recycled once it reaches its end of life. The electric bus is capable of producing lesser noise levels compared to conventional buses thus allowing the BRT to access residential areas without being a nuisance even at night times. The electric bus can also travel for more than 250 kilometres on a single charge which takes approximately five hours. 

## An Introduction to the Sunway BRT

**A** Bus Rapid Transit (BRT) is a bus-based public transport system designed to improve capacity and reliability compared to a conventional bus system. Typically, a BRT system would include a dedicated bus lane and priority at junctions. The BRT aims to combine the capacity and speed of a metro with the flexibility, lower cost and simplicity of a bus system.

### Local Context

The BRT Sunway Line is a part of the Klang Valley Integrated Transit System servicing the south-eastern area of Petaling Jaya, Malaysia. The line was introduced in 2015 by operator Rapid Bus to service the high-density areas of Sunway and Subang Jaya.

The buses have an exclusive right-of-way on an elevated guideway that is not shared with normal road traffic. This is similar to other rapid transit elevated railways such as the Xiamen BRT in China. However, bus operators other than Rapid Bus are not allowed to use the elevated guideway under any circumstances. The 5.4km track between Setia Jaya and USJ7 is dedicated for a high volume of commuters to avoid congestion in the area and allows commuters to interchange to rail transit. Typically, many college students can





# 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 (CETRAN). 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 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.”

**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.” ■

# Proving on Own Grounds



**P**T Gajah Tunggal Tbk, the largest integrated tyre manufacturing company in Southeast Asia, inaugurated its tyre testing track facility (proving ground) which is located in Karawang, West Java, on Thursday, 19 May 2016. This inauguration ceremony was marked by the signing of an inscription by the Indonesian Minister of Industry, Mr. Saleh Husin and witnessed by the Company's President Director Mr. Christopher Chan along with other members of the Company's Board of Commissioners and Board of Directors, Karawang district officials and all other invitees.

During his speech, the Company's Vice President Director, Mr. Budhi Santoso Tanasaleh mentioned that this tyre testing facility (proving ground) of which construction started in 2013, is part of the Company's major strategy to improve the Company's capabilities in producing high quality tyre products to meet local and international customer's needs, through its research and development center of international standard. With this proving ground, the Company is more able to develop and create innovative tyre products for passenger cars, commercial vehicles and motorcycles.

The construction of this 65 hectares proving ground facility is conducted in two phases. The first phase focused on the construction of the testing facilities namely ISO Noise, Vehicle Dynamic Area, Wet Braking & Handling and Longitudinal Hydroplaning.

This facility also has an operations center which is equipped with the latest tyre repair and maintenance equipment. The second phase will be conducted according to the future needs of the Company's research and development.

By having this proving ground facility, the product development cycle and the time to launch the Company's new products are expected to be shortened, hence the Company will more competitive in the domestic and global market. Apart from being used to test the Company's tyre products, the proving ground can also be used to test the prototypes and products of the Company's OEM partners. This proving ground will support the Company's motto which is "Driven by National Pride".





## Larkin Sentral Moving Forward with Time

*Farezza Hanum Rashid took a trip down to Johor Bahru and saw what began as a local wet market in 1994 is now becoming a modern bus and taxi hub akin to the standards of an airport.*

The Larkin bus station, which is now known as Larkin Sentral, in Johor Bahru began operations in 1996. It sits on a 6.57ha site and it includes, besides the wet market next door, 242 shop lots, including a bazaar on the third floor of the main building. At the bazaar one can find almost anything one needs from clothes to hair salons, massage parlours, clothe alteration services, watch and clock repairs and even pots and pans. Until today, JB locals and even Singaporeans would go to the wet market in the wee hours of the morning to buy fresh produce.

Larkin Sentral is one of the few, if not the only, bus terminal which has its own mosque, the Masjid An-Nur Larkin Sentral. On Fridays it is packed with men for the Friday prayer.

When Asian Buses visited the terminal in the middle of February, the atmosphere was filled with the hustle and bustle of commuters looking for ticket counters, their bus bays, a place to eat and shoppers looking for items to buy, while upgrade works were well on their way. It was clear that the transition was not affecting businesses. In fact, it gave a picture of better businesses to come when the upgrades are complete, which is scheduled to be in March. "It is an old terminal, we have to upgrade everything. We have around 27 000 people a day here and for many years they have had to bear with hot and stuffy corridors that are dimly lit. The RM 20 million upgrade includes air-

conditioned waiting lounges that could accommodate up to 1 000 passengers and electronic signboards to inform passengers of the departure and arrival time of buses. There will be new ticketing booths and the bus bays, 61 in total, will be constructed and upgraded with floodlights," a management representative told me.

He said now the Centralised Ticketing System (CTS) machines are all fully functional, with only a few bus companies left that have not been integrated into the system. For those few remaining companies, temporary manual ticket counters were set up outside, near the taxi stands. They had to be relocated to a temporary location because where they used to be, will be the brand-new departure halls.

As for the CTS, there are 14 counters and 20 self-service kiosks. CTS started operating at the terminal on Dec 15, as part of the on-going upgrading of the terminal. At the CTS counters and machines, there are monitors that clearly state the names of express bus companies, and other ticketing information, including pricing. Like airplanes, passengers can also select their preferred seats from the monitor. The system is more convenient for passengers as they can clearly see from the monitors if tickets were still available. There are vested CTS officers who are always on standby to assist those who are still unfamiliar with the self-service kiosks.



Although the process of buying bus tickets is easier, the ticket itself is not. When I used to take the bus back to my hometown, the tickets simply state the bus company, date and time, and if I was lucky, they would tell me what bay my bus would be at. The tickets produced by the CTS, or “boarding passes” as they are called now, will have printed on them besides time and date, the passenger’s name, IC number, seat number, the bus’s registration number, bus platform and a QR code.

Larkin Sentral has upped its security. Passengers are to be at the departure hall 30 minutes before their bus is scheduled to leave. At the hall’s entrance are stationed auxiliary police who will scan the QR codes. If the passengers have more than 30 minutes before their bus departs, the police will deny them entry into the departure hall. This is not only to avoid over-crowdedness in the hall, but to avoid non-passengers from entering and sitting at the air-conditioned hall for no reason. Even family members and friends have to say their farewells at the gate now, so gone are the days when our parents would send us all the way to our seats.

The CTS is also hoped to eradicate ticket touts. According to the management, most complaints received from the public were of the touts, or famously known in Bahasa Malaysia as “ulat” (maggots). Their modus operandi is by approaching passers-by to sell bus tickets, which made many people uncomfortable and annoyed. There were even reports in the past of touts selling fake or overlapping tickets. Since the CTS started operating, there were noticeably less touts at Larkin Sentral and hopefully they will all be gone by March.

There are fifty-four bus companies operating from the station. The average number of buses going in and out of the terminal is about 1 800 trips a day while during school holidays, it could go up to 2 300 trips, including international buses to and from Singapore and Thailand. I was told that commuters to the Lion City would start queuing up since 5am for the 6am bus. These are mostly people who work and study there.

The last bus departure is at around 12.30am while the last to arrive would be at around 4am. With many budget hotels available around the terminal, commuters need not loiter in the terminal compound to catch their early buses.

To make these changes, the initial step of talking to the operators was the hardest part. They were comfortable with the way things were, but the management decided that they had to change with time. There were many different meeting sessions with the operators’ representatives and after having convinced all of them, managing the transition was smooth.

Besides buses, Larkin Sentral had also converged all taxis in Johor Bahru since 2014. Previously, taxis to and from Singapore were stationed on Jalan Trus, near Plaza Kotaraya in the city centre but now they have their own bays at Larkin Sentral, along with city taxis and inter-state taxis. The taxi bays are very well organised. If we normally see taxis in long lines waiting for passengers, the ones at Larkin Sentral go to their respective platforms one at a time, only when an earlier taxi has departed.

Development will not stop there. The management, Damansara Assets (a subsidiary of Johor Corporation), has presented a plan to the local council Majlis Bandaraya Johor Bahru, for a proposed multi-storey car park. Larkin Sentral also has a programme for the asnaf (a group of people worthy of receiving a Muslim tithe). There will soon be shop lots built for those in that group, who are interested to start their own businesses.

There is a Larkin Sentral “Waqf” (an endowment made by a Muslim to a religious, educational, or charitable cause) which began in 2017. This Waqf is used for the development of the terminal where everyone from all layers of society, race and religion, will benefit from.

With all that is happening at Larkin Sentral, we can soon expect to see a smaller-scale Bandar Tasik Selatan (TBS) Integrated bus terminal in Johor Bahru. <sup>20</sup>

# Qamar and Her SPAD Team's Vision for Safer Buses

*Asian Buses interviewed Qamar Wan Noor exclusively on her 95th day as SPAD's Chief Operating Officer.*



**B**efore her move to the Land Public Transport Commission (SPAD), Qamar had a long career with oil giant Shell and served in senior posts in Malaysia, Asia-Pacific and the Middle East. In Shell she had also headed supply and marketing distribution teams at marine logistics and land terminals in Oman, United Arab Emirates (UAE) and Singapore.

At SPAD, Qamar is responsible for the transformation of the transport industry encompassing goods transport, bus and taxi services and related infrastructure. It includes the implementation of national projects like myBAS under the Stage Bus Services Transformation Programme and restructuring of the bus network in Greater Kuala Lumpur and the Klang Valley to ensure this mode of transport is efficient, integrated and sustainable and give value for money to consumers.

Read the full interview to find out what Qamar and her team has in the pipeline to achieve SPAD's aspirations.

**AB:** What has it been like, nearing your 100th day in office?

**Qamar:** The first 95 days have been very exciting, filled with many challenges and opportunities. We have many programmes and initiatives planned for all industry players and I hope I can work together with my team, the SPAD team in general and with the various other authorities. Of course, not to forget, the operators who hopefully will work together with SPAD.

**AB:** Can you share with our readers what those programmes and initiatives are?

**Qamar:** We are spending a lot of energy on bus improvement in both safety and overall operations, and we will start with express buses. As we speak, we have already prepared some initiatives and proposals, under our bus

laboratory programme, to be approved by the Economic Council (EC). I will not be able to give out the details yet until we get the approval, but we have a good support from the recent budget from the government. The Honourable Prime Minister mentioned a RM45 million allocation for public transportation, for the improvement on safety including biometrics for express buses. We want to take it as a pathfinder in paving the way to improve on the existing road conditions for express buses and then we will move on to the other segments of buses.

### **Biometrics**

By having the biometrics, we can ensure bus drivers don't go into fatigue. We want to work also with people like the Malaysian Institute of Road Safety Research (MIROS), the Road Transport Department (JPJ), the police and of course, the bus operators, to get them to start changing their way of working. We can better control drivers' working hours because we know many of these bus drivers exceed their legally permissible driving hours. So, by having biometrics, we should be able to provide the control that we want the operators to have.

### **Route Cleansing**

We also want to do a route cleansing for express buses. There are many overlapping routes. When bus operators come in to apply for licences for additional routes, we can see overlapping "popular" routes by many operators. We want to consider the economic sustainability and the supply and demand of these routes. I have covered some things in terms of the bus express laboratory, but I am not able to give more details until we get the EC's approval. Now we are also engaging with many parties regarding our express bus lab recommendations.

### **Bus Terminals**

Another bus related effort will be for the terminals. We need to work concurrently in addition to coming up with more licencing conditions for terminals. We want to work with the terminals to ensure, say, that the centralised ticketing system is implemented. Now we have the Terminal Bersepadu Selatan (TBS) which I put as the benchmark or pathfinder for terminals in Malaysia at this point of time, because they have done well in their operations, and they have both the centralised ticketing system and the terminal operating system. Coming soon, the Melaka Sentral, Larkin Sentral, Klang Sentral, Shah Alam Section 17 and Penang Sentral are all coming up with new or upgraded terminals, and they are putting in the centralised ticketing system, so they can ensure that their customers will buy legal tickets.

This will take away the huge problem of having touts in the market. We find that it works, and it is illegal for operators to issue manually written tickets.

### **Drivers Card**

At the moment SPAD has already implemented, monitored and regulated drivers' cards for taxi drivers so we are doing the same for e-hailing drivers once we have the law gazetted. In addition to this we are going to introduce the same for bus drivers. This will hopefully control the drivers' movements. In the event of an accident, investigations often find many summonses against the driver which is now not being monitored. By monitoring it will be difficult for the so-called blacklisted drivers to move and drive another bus. Bus operators have also approved such move by SPAD.

### **Complaints Management**

We have the new MeterOn V2.0 where we have added buses into the app. You don't have to be a passenger to use the app to make a report on drivers' misconduct. Whenever you are on the road and you see a bus going fast, you can use the same app just by entering the bus's registration number and press the alert button. You can also submit a picture of the bus if you have it, just like with taxis with the same app. The app is something we highly encourage road users and public transport users to start using.

SPAD also has the APM (Accident Prevention Management) which the public can call at the toll-free number, 1800-88-7723. Some drivers won't be too pleased if you try to intervene immediately so if you call that number, our staff at the complaints department will answer in less than 10 secs. They will call up the operator of the bus if you give the plate number. The operators will then call the drivers and tell them to bring the speed down. Within 24 hours, the company has to surrender to us their GPS reading of that particular day, from morning to night. If we find speeding in the report, administrative action will be taken like suspension or revocation of the driver's licence, depending on the seriousness of the offence. With that said, all buses must be equipped with GPS, it's not optional. If they fail to give the GPS report within 24 hours, the ICOP (Industry Code of Practice) team will be dispatched to further investigate. "Why are you not giving us your GPS report? You don't have one? You did not install a GPS? You installed something that isn't working? Are you not monitoring it?" We have had situations where buses have GPS but they are either not working well or not being monitored at all, which is a joke. With complaints apps, to date we saw a 44 percent decrease in speeding complaints.

### Safety Workshop

This month (December) we are leading a workshop on bus and freight safety transformation where we have invited folks from MIROS, JPJ, JKJR and the police, among others. Our aspiration is to reach zero fatality for bus and freight by 2022. There are about 7 200 road fatalities every year and if we don't do anything extraordinary, nothing will change. In 2017, out of that number, 2.3 percent were contributed by bus and freight. We are now hitting about 22.6 percent road fatality per 100 000 population in Malaysia which is very high compared to let's say, Sweden (2.8 percent), Japan (4.7 percent) and Australia (5.4 percent), and if we don't change our numbers will remain or go up, either way is not good. One fatality is one too many and we don't want people to die on the road. We want to see a targeted reduction in the fatalities as per the Road Safety Plan of Malaysia whereby by 2020, which is 16.2 percent from the existing 22.6 percent fatalities per 100 000 population.

We will focus on the vehicle criteria, the driver competencies and safety management. It will be a short but very intense workshop, a combination for buses and freight.

**AB:** The media has reported an increase in road fatality. We see JPJ, JKJR, MIROS, SPAD and others put in initiatives into place, yet the number of fatality is rising. Are these initiatives not working? Or is there something wrong with the mindset of road users that these initiatives are not working?

**Qamar:** It's a mixed bag of answers to that question. To say that any initiative is not working is not right. We can say that if we do not allow anyone to ride motorbikes anymore, immediately 60 percent of road fatalities will be improved but that will be a socially and economically not feasible initiative or directive from the government, it just doesn't make sense. People still need to get from point A to point B and for many people, that's the only way for them to move around. So, I don't think there's any one kind of answer solution, otherwise it would've been done a long time ago.

So, we can talk about more awareness, perhaps? There is no harm in having more awareness so if JKJR is doing so every month and targeting school kids, for example, they can then bring it back to their families. They can remind their parents to put on their seatbelts or helmets, just something basic that you can start with the young. Also, we need motorcyclists to wear something bright and not looking "cool" all in black at night.

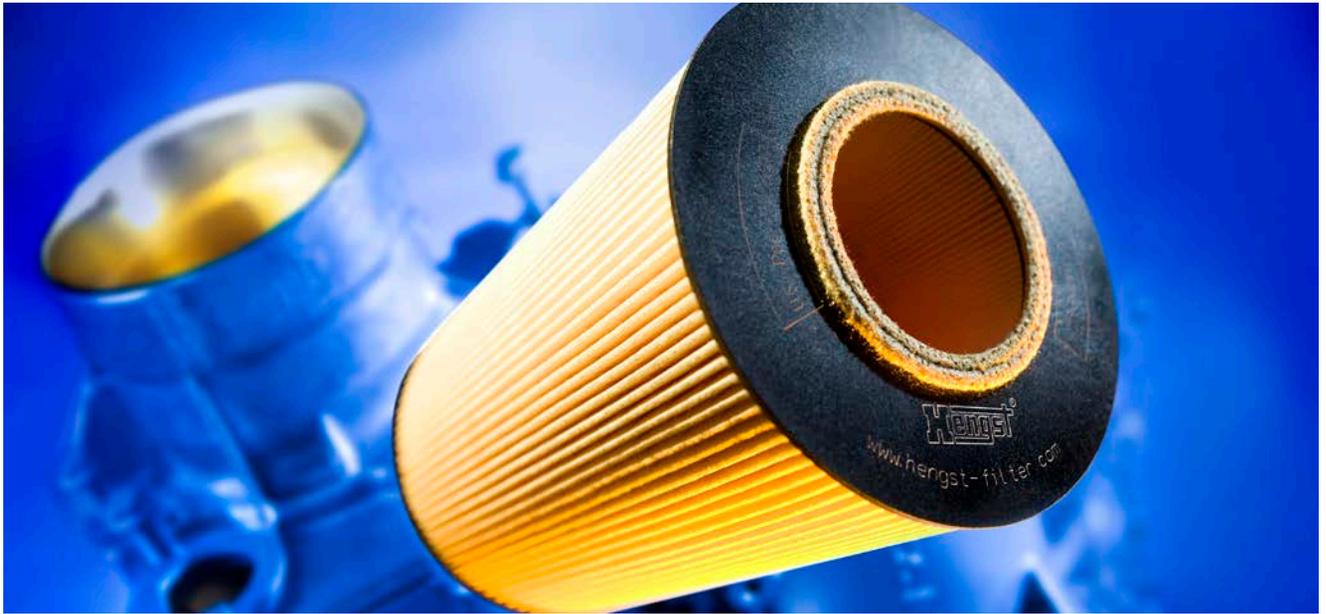
It's not an easy question. It is frustrating in my view, very frustrating, seeing how many unnecessary deaths we see on the road but again to have a quick solution is not possible. But then I agree, from my experience changing behaviour will take a longer time and a more sustained approach, it's not easy. From our side we are focusing on regulating the operators. We want to make sure they comply with our licencing conditions and ICOP, but to ensure they comply we must put in quite a lot of effort. And I think, with the police putting in more AES (Automated Enforcement System) cameras will help with curbing bad behaviour side.

**AB:** 70 percent of accidents occur due to road users' behaviours. Where do you stand on autonomous vehicles for both bus and trucks?

**Qamar:** It might be the answer to it, but we must consider the technology itself, the availability and cost. Now it might not be as affordable. We must look also into the readiness for the adoption of such technology into the market. We don't have a policy on it yet, so we will wait and see pilots being done elsewhere and we try to learn from them, see what's happening say in Singapore, with the pilots that they are doing now and learn from them. SPAD as a regulator must be flexible and more adaptable to the changes in the market, and then come up with proper licencing conditions to suit the changes in the industry.

**AB:** From private sector to government body, what motivated your move?

**Qamar:** I was in this multinational oil company and it's known to be quite a benchmark, at least in Malaysia, when it comes to road safety. I was involved in the logistics operations in downstream in Malaysia, Singapore and the Middle East for quite some time. Based on my own experience in the industry, the way the company has achieved when it comes to road safety in a quick time, from planning to implementation, I have learned a lot from it. So here I am, wanting to be able to help bring the overall public transport in Malaysia to resemble somewhat what we could do in the oil and gas transport industry. We are talking about the same people in the same nation, driving the same vehicles on the road and using the same road. And if it can be done successfully in one industry, I'm sure we can replicate the success into the existing freight and bus industry. Of course, this is a bigger ecosystem than what I was involved in before so that is the bigger challenge, but I'm looking forward to it and looking forward to meeting with the associations, bus operators and terminal operators, and improving the freight and public transport industry. ■



## Hengst Filter: Branded Quality that Pays Off

*When it comes to better engine performance, cleaner, longer and safer trips are made possible thanks to high-quality materials used in filters for your bus.*

When it comes to consumer goods, there might be only a marginal difference between high-end products and those that perform the same task at a lower price point. However, in the case of filters for commercial vehicles, namely oil, air and cabin filters, it is crucial to use top end items. These highly sophisticated products influence the lifespan of engines, fuel consumption and emissions as well as the air quality inside the cabin significantly.

### Innovative Filter Solutions for all Markets

Filter manufacturer Hengst is a development partner and OEM supplier for many well known automotive brands. As an OEM manufacturer, the company develops and produces high-quality and multi-functional filtration and fluidmanagement systems for passenger cars, commercial vehicles and off-road applications. Thanks to the use of innovative and first grade

materials, Hengst has gained an excellent reputation in the automotive industry as well as in the Independent Aftermarket (IAM). Filters developed for OEM applications have been adopted as identical parts for the aftermarket program.

### A Host of Perfect Parts define High Tech Filters

Just what defines a modern Filter from Hengst? The central and most important part is the filter surface, which is connected to the endplate using a special method to connect both parts. In turn, the maximised filter surface ensures a low pressure difference during the entire lifecycle. Naturally, OEMs can expect that each filter is optimally adjusted to the respective vehicle it is used in.

### No Warranty for Cheap Alternatives

Buy cheap and you buy twice is a motto that Hengst has adopted. According to Hengst, it has been proven time and again that the purchase of cheaper alternatives typically results in higher cost as the use of low-cost materials oftentimes results in damages or claims for faulty products. Users that do not emphasise the use of quality brands have to live with increased wear and tear, clogged up injector nozzles, piston or event engine damage, higher fuel consumption and increased emissions. In many cases, one can observe reduced performance due to the use of substandard sealants and filter materials. Additionally, inadequate protection of the surface and lower particle absorption can lead to clogged up filters. Typically, should damage to the engine result as a consequence of using cheap alternatives, warranties are voided by the manufacturer of the vehicle. This is certainly a risk that can be avoided by using Hengst Filters. 





## Go Sightseeing Around Kuala Terengganu In Its Unique "Bas Kite"

*Inspired by traditional wooden houses, batik and songket, the Bas Kite service was launched to boost tourism under the Visit Beautiful Terengganu campaign.*

**Y**ou can find a great mixture of the modern and traditional in Terengganu. While celebrating the newly launched electric myBas stage buses, the state government also embraces its unique historical features with the "Bas Kite" tour buses. Situated in eastern Peninsular Malaysia and bordered in the northwest by Kelantan, the southwest by Pahang, and the east by the South China Sea, and surrounded by several outlying islands, Terengganu just boasts with the cultures of the Malays, Chinese, Indians, Siamese and Orang Asli. All these influences are highlighted in Bas Kite.

The name "Bas Kite" (Our Bus) reflects the local Terengganu dialect, where in formal Bahasa Malaysia it should have been called "Bas Kita." It represents Terengganu's people-centric and closer-to-the-heart values. The design concept of Bas Kite is that of the traditional Terengganu houses with the unique carved wood roof detailing.

The window panels and windscreen are also designed like the windows of the traditional houses. They are wide to allow passengers to enjoy an unobstructed panoramic view of their journey around Kuala Terengganu. The exterior is designed in vibrant colours depicting diverse art, culture, heritage and nature.



The interior of Bas Kite features batik patterns, songket (a type of cloth embroidered with gold or silver thread) and wood carvings. The seats are also wooden, creating an ambience of heritage.

It was launched in January 2017 by Terengganu Menteri Besar, Datuk Seri Ahmad Razif Abd Rahman in conjunction with the Visit Beautiful Terengganu (VBT) 2017 campaign. With the capacity of 34 passengers, Bas Kite is also equipped with wi-fi access, LED TV screen and tourism brochure rack.

Fares range from RM1 to RM3, and there are two routes, both originating from the city bus terminal. There are also single-route daily passes at RM5 each and all-route daily passes at RM8 each. The routes were designed to pass through more panoramic and strategic areas to promote tourism. There are four Bas Kite buses, two for each route.

Route One departs to Dataran Shahbandar, then to the Primula Beach Hotel, Pantai Batu Burok, Permai Inn Hotel, Masjid Terapung, Noor Arfa craft complex, the Terengganu Science and Creativity Centre, Gong Tok Nasek songket village, Gong Kapas cake shop and returns to the bus terminal.

Route Two proceeds to Dataran Shahbandar, past the Grand Continental Hotel, Tanjong Vista Hotel, the Batu Bersurat roundabout, Bukit Keledang royal mausoleum, Felda Residence Hotel, state museum, Taman Tamaddun Islam, Crystal Mosque, Kampung Losong, Pulau Kambing

Waterfront, Seri Malaysia Hotel, Pulau Warisan, Kampung Cina, Pasar Payang and returns to the bus terminal.

Bas Kite was previously known as “City Bus” when it was under the management of Syarikat Cas Ligas Sdn. Bhd. but was rebranded for VBT 2017, to attract more tourists to Kuala Terengganu. The upgrades began in 2016 with the overall cost of almost RM500 000 which included engine upgrade, installation of the fare machine, interior decoration and the application of VBT-concept stickers.

At the launch ceremony, the Menteri Besar said he hoped Bas Kite would help boost tourism in the state, specifically in Kuala Terengganu. He added that the state government had allocated RM1 million for the purchase of two double-decker buses to add to the existing Bas Kite fleet. A VIP bus service is also being planned on a charter basis for wedding functions and special group tours. ■





## If She Can, So Can I

*As the first female BRT driver in Malaysia, Sofia definitely has had her fair share of attention. She speaks to Asian Buses in this in-depth article on her daily life and what makes her a noteworthy figure for other females out there.*

**H**er name is Puan Sofia. She is the first female Bus Rapid Transit (BRT) driver in Malaysia. At 29 years old, she has been a BRT driver with RapidBus for approximately six months. Once a taxi driver alongside her husband, she decided to switch course when she saw an older female bus driver and felt a surge of interest. "Why not I try it as well? If she can do it, I can do it too."

The decision was not an easy one. After all, the industry is male-dominated and there is the lurking social stigma that "women cannot drive as good as men". Sofia definitely proved us wrong here. The support from her family was a tremendous motivating factor as well. After attending a course which took five months with RapidBus, Sofia was well-equipped with all the necessary information she needed to undertake her responsibility as a bus captain.

The mother of two starts her day in the wee hours of the morning. Residing in the area of Setiawangsa, she has to start her day while others are still fast asleep. She drives to the depot of the BRT Sunway while her kids and husband are still in bed. She feels bad that she is unable to send her kids off to school as she has to start her day earlier. Her husband however helps lessen the burden and they have successfully worked around each other's schedule to build a happy family.

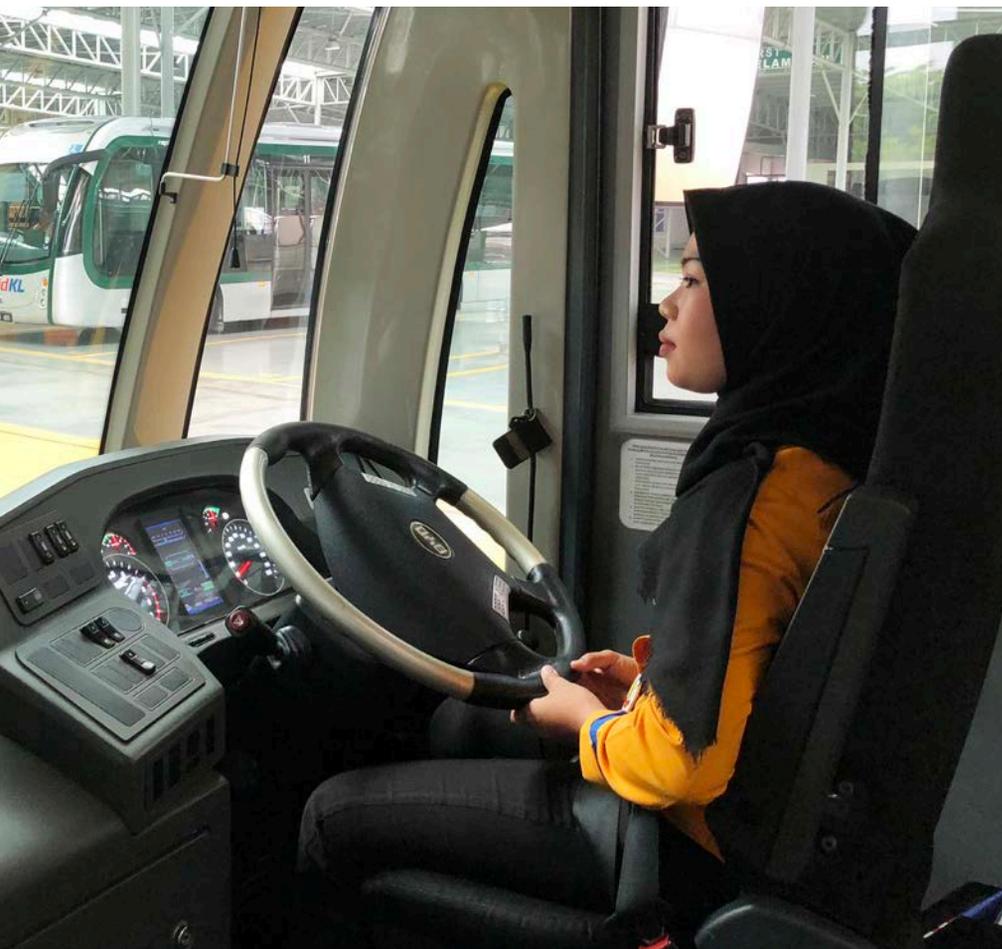
The journey from her house to the BRT depot in Sunway usually takes Sofia around 30 minutes as there is almost no traffic during those times. Once at the depot, she logs in for work and exchanges greetings with her colleagues as they get ready for work. "My colleagues make starting work at such early hours a lot easier. We joke around and ask about each other's family and concerns," shared Sofia.





Once she is assigned her designated bus for the day, she does her routine checks before heading out to ferry her passengers waiting to start their day. Tyre pressure, signals and windshield checks are part and parcel of the routine and must be done without fail. She is meticulous with her inspection as she slowly goes through her checklist. "We must not be lazy when checking the vehicle even though the act is very repetitive and problems have yet to occur. I always conduct my routine checks with the thought that accidents can happen anytime, anywhere. As a bus captain, I am responsible for the safety of my passengers therefore I must ensure that everything is in perfect working condition," stressed Sofia.

Sharing about her time working with RapidBus, Sofia is glad to know that she will be well-treated in the corporation. She is looking forward to building her career with the company as they have a well planned-out career building mechanism in place. "Depending on your performance and track record, one can easily build a career being a bus driver here and yet have a balanced lifestyle. I have met other colleagues who started as a bus captain years ago and have gone to be trainers within the organisation. I am not too worried about competition amongst my colleagues as everyone is just trying to make a living and provide for their family. Not a matter to get stressed over," shrugged Sofia.



On her off days, Sofia likes to spend her time with her family. She likes to bring her kids to the neighbourhood mall for the latest movies and occasionally, they go to the park instead for some outdoor activities. "On my off days, I spend them like a typical working mother and devote my time to my family. My children never really had any problems with both their parents working as that was how it was for them growing up. I guess it is also fortunate that my husband is able to work around my working hours"

Addressing the issue of female drivers, Sofia encouraged more females to join the profession as there is in reality nothing stopping them. "Just as you would drive a car, a bus is just a bigger version. The social stigma on the profession as a bus captain, what more a female bus captain, is baseless. I hope that in the future, more women will join the profession and find joy in helping others reach their destination safe and sound," she concluded. ■

# Get Potholes Patched for a Smoother Drive in Selangor with Waze

To ensure a smoother drive in Selangor this school holidays, road users are encouraged to take advantage of the collaboration between Waze and the Selangor State Government to patch potholes with quicker efficiency.

“With this initiative, drivers in Selangor have a simple and effective way to report potholes directly to the authorities, so they can get patched quickly,” said Edward Ling, Country Manager for Waze Malaysia.

“Waze has always been about the community. It is the members of the community who are the ones constantly sharing real-time traffic data and other relevant information in order to help ensure smoother journeys. We hope more government bodies will come on board and partner with Waze through this free data exchange program,” Ling added.

According to Smart Selangor Delivery Unit (SSDU), this initiative covers all twelve Selangor State Local

Authorities, namely: Petaling Jaya (MBPJ), Shah Alam (MBSA), Hulu Selangor (MDHS), Kuala Langat (MDKL), Kuala Selangor (MDKS), Sabak Bernam (MDSB), Ampang Jaya (MPAJ), Kajang (MPKJ), Klang (MPK), Selayang (MPS), Sepang (MPSepang) and Subang Jaya (MPSJ). However, some roads in Selangor are privately owned or separately managed by the Public Works Department (‘Jabatan Kerja Raya’), the State District Office (‘Pejabat Daerah / Tanah’), or the Malaysia Highway Authority and Concessionaires.

SSDU Deputy Program Director Dr Fahmi Ngah said that from January to November this year, the Selangor State Government has received more than 19 000 reports via Waze users and have patched almost all of those that are on Local Authority roads. “This citizen collaboration has shown tangible impacts and we hope that Selangor citizens continue to assist the state in pothole detection via the Waze app.”

## Product Portrait: DT 2.10802 Camshaft

The camshaft opens and closes the engine’s intake and exhaust valves at the right time. This is achieved via an exact stroke and a precisely defined sequence.

The camshaft is driven by the crankshaft via gears and timing belts. With a transmission ratio of 2:1, the camshaft rotates only half as fast as the crankshaft. The precise shape of the cams is crucial for ensuring the correct opening time and valve lift. The steel used in their production is characterised by high wear resistance. Induction hardening of the camshaft prevents micro-cracks in its surface and increases its service life. Its quality is additionally ensured by 3D recordings and dynamic tests.

### Tips & Tricks

If the camshaft is replaced, the bearings must also be replaced and the attached components checked. They must also be checked for proper functioning after a camshaft adjustment. It is also essential to check the oil supply to the lubrication points.



During the subsequent assembly, the correct valve play, the correct assembly torques, as well as the tightening sequence and alignment with the crankshaft must be adhered to (as per the vehicle manufacturer’s instructions) in order to prevent incorrect loading and thus early

failure of the camshaft. The camshaft may also need to be adjusted according to the respective vehicle type. For all assembly work, the tool/special tool specified by the vehicle manufacturer must be used.

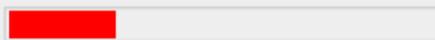
### Snap Poll

Should Tesla also make Electric Buses?

Yes - 75%



No - 25%



The voting for this poll has ended

## MAN Double-Decker Down Under for the First Time

In Sydney, 38 new double-decker buses have recently started operating on the MAN A95 low-floor chassis. In so doing, MAN Truck & Bus has successfully entered the double-decker city bus segment in Australia.

Some 38 bright yellow double-decker buses have been operating since the end of last year between Sydney's business centre and the Northern Beaches – on the B line. This line currently connects the Wynyard Railway Station with Mona Vale, but is set to be expanded to Newport this year. Penske Commercial Vehicles, MAN Truck & Bus' sales partner in Australia and New Zealand, supplied the MAN A95 double-decker buses to Transport for New South Wales. "After various successful projects with the MAN A95 chassis in Singapore and Hong Kong, this marks a further expansion of our presence on the market and we are delighted to have now made it into the double-decker city bus segment in Australia as well", says Christian Schuf, Head of Sales & Product Bus MAN Truck & Bus Asia Pacific. "In order to continue to meet the wide range of market requirements, the A95 chassis has also been available with the Euro 6c exhaust version since the beginning of the year", he adds.

The MAN A95 low-floor bus chassis for Transport for New South Wales – the operator of the B line – will be powered by a 320 hp (235 kW) six cylinder diesel engine in compliance with Euro 5. The ZF Ecolife automatic gearbox with integrated hydraulic retarder combines sustainable driving with high efficiency whilst ensuring impressive smooth

running. The driver, passengers and nearby residents all benefit from the low exhaust gas emissions and the quiet engine. Passengers can easily board and alight thanks to the low entry height at both outward-swinging doors and the kneeling function, which allows the vehicle to be lowered at the side. Realtime information such as ETA and scheduled stops is clearly displayed on large screens. Various safety features such as the electronic brake system (EBS), electronic stability program (ESP) and rollover protection (ROP) safeguard passenger and driver safety. The body of the twelve metre long vehicles originates from Malaysian body manufacturer Gemilang. ■



## Higer Buses Serve 2018 "Two Sessions"

From March 3 to 5, the 13th National People's Congress (NPC), China's top parliamentary body, and China's People's Political Consultative Conference (CPPCC), China's top political advisory body, convened their sessions, also known as "two sessions" in Beijing. Higer Buses, for this year, have been chosen for providing the transport service for delegates for nine consecutive years.

Successfully passing a host of stringent tests, Higer buses fully meet the extremely high safety and environmental requirements of the annual events.

This year Higer KLQ6898Q was the selected service vehicle for the "two sessions". Having provided transport services at a number of eye-catching events, including China's V-day Parade, the 19th National Congress of Communist Party of China, etc., the vehicle not only boasts a uniquely fashionable appearance, but also achieves higher reliability and delivers consistently steady performances, pushing the transport service standards at the "two sessions" to a new historical level.

Apart from its high quality standards, Higer's backup services are equally competitive. To ensure the smooth operation of its vehicles, Higer has rolled out several transport solutions to deal with emergencies. Technicians from Higer also work around the clock to ensure that every Higer bus is in its best conditions while in operation.

Before this year's "two sessions", Higer buses were also designated as the service vehicles for the highest-level political events at the provincial level in Guangdong, Henan, Jiangsu, etc., providing impeccable transport services.

In January this year, Higer overcame a host of difficulties and made its way to the Top Five Club in China's bus manufacturing industry. Moreover, its sales volume jumped by 214.89 percent year on year. Its sales of large-sized buses ranked the fifth place in China, up by 137 percent year on year and its sales of medium-sized buses ranked the fourth place in China, up by 255 percent year on year. ■

# Amphicoach for Tourism and Rescue

*Besides boosting tourism, the amphibious bus could also rescue flood victims in Terengganu*



floods are not so bad, where more flood victims can be saved with the Amphicoach," he told reporters.

For the record, Terengganu APM, which is the State Disaster Management Secretariat, currently has two amphibian buses, the "Sealegs".

Che Adam said that some of APM's officers were already trained to handle the two dual-function buses. "However, to use this Amphicoach is subject to the state government's prior permission," he said.

The idea of buying the Malta-made Amphicoach was initiated by former Menteri Besar, Datuk Seri Ahmad Said for tourism and flood victim rescue operations of flood victims in mildly flooded areas.

The vehicle is currently in Port Klang for some dealings with the Road Transport Department (JPJ) and PUSPAKOM before arriving in Terengganu. ■

**T**erengganu's Malaysia Civil Defence Force (APM) welcomed the state government's proposal to use amphibious buses or "Amphicoach" during flood seasons in the state.

Its director, Lt Colonel Che Adam A Rahman said although the main purpose of the purchase of the vehicle was to further boost Terengganu's tourism sector, the amphibious bus could also have a second purpose.

"When the monsoon season hits Terengganu, it is proposed that the use of Amphicoach be extended to save flood victims by the State Disaster Management Secretariat. We can use this in areas where the

## Volvo Buses has Analysed What Passengers Want

**S**ome people want a three-course dinner, others prefer to surf, chat, or just relax. Almost half are interested in safety and a massive two-thirds reveal that they use seat belts on coach trips. These are some of the results of Volvo Buses' passenger survey, conducted in six European countries.

All told, 6 000 people who have travelled by tourist coach or long-distance bus in Germany, Italy, Spain, the United Kingdom, France and Sweden were interviewed for their opinions on what it takes to make a bus trip a positive experience.

### Wi-fi, safety and comfortable seats are important

So, what do people most like doing while on board? Sleeping, chatting, watching films and reading are popular. It's therefore hardly a surprise that comfortable seats and plenty of legroom are among the most important conditions for a good journey. The list of services that passengers want is topped by a fast wi-fi link. This is something for which many passengers, above all younger ones, are prepared to pay extra. Most feel it is important to be able to buy something to drink or eat on board. A few even want the option of splashing out and ordering a three-course dinner. Safety consistently receives a high rating. 47 per cent

of passengers want information about the bus's safety before they book their tickets, and 66 per cent use the bus's seat belts. Seat belt usage is highest in Sweden, France and Spain.

### Top 3 tips to get on with other passengers

The survey also reveals a lot of information for those who want to get on with their fellow passengers. Top of the list is not making noise. Noisy passengers are consistently felt to be the most annoying problem on a bus trip, according to a huge 79 per cent of respondents.

Tip number two: don't push your knees into the backrest of the seat in front. Few things are perceived as more irritating than having the knees of the passenger behind you digging into your back (71 per cent). Strong-smelling food is not appreciated (50 per cent), although here Italian passengers show remarkably high tolerance (25 per cent). Swedish passengers appear to have fewer problems with passengers taking off their shoes – something that is seldom regarded as acceptable on the continent.

"All told, we can say that comfort, safety and pleasant fellow passengers are significant factors for anyone travelling far by bus. So yes to wi-fi and comfortable seats, but no to sharp knees and bare feet," says Niklas Orre. ■

SOUTH EAST ASIA'S  
LARGEST COMMERCIAL  
VEHICLE EXHIBITION  
20 - 22 JUN 2019, MINES CONVENTION CENTRE



Book your  
booth now!  
Contact Nicole,  
012 201 5528  
for details

**ORGANISER**

Asian Trucker Exhibition Sdn Bhd  
No. 27-1, Block C, Zenith Corporate Park, Jalan  
SS7/26 Kelana Jaya, 47301 Selangor, Malaysia  
info@asiantrucker.com

[www.mcve.com.my](http://www.mcve.com.my)

Organised by



Freight Forwarder



Main Contractor





ENHANCING LIVES THROUGH SUSTAINABLE TRANSPORT SOLUTIONS

**YOUR CONCERN, OUR MISSION.**

As the world turns, so do the wheels of road transport. An ever-increasing population means our cities are growing and accelerating mobility needs. As a consequence, vehicles transporting goods and people in and between urban areas will become even more crucial.

Transport solutions for tomorrow must be of a new kind, a kind that has minimal impact on the environment. With a long and proven track record of providing cutting-edge technology and fuel efficient, clean running vehicles, we are proud to offer tomorrow's sustainable transport solutions today.

Visit [scania.com.my](http://scania.com.my) to find out how we continue to enhance lives with sustainable transport solutions.

 [fb.com/scania.malaysia.sdn.bhd](https://www.facebook.com/scania.malaysia.sdn.bhd)

 [linkedin.com/company/scaniamalaysia](https://www.linkedin.com/company/scaniamalaysia)

**SCANIA**

Scania (Malaysia) Sdn Bhd (518606-D) No.1 Jalan Tiang U8/93, Bukit Jelutong Industrial Park, 40150 Shah Alam, Selangor D.E. Malaysia

Scania pursues an active policy of product development and improvement. For this reason the company reserves the right to change specifications without prior notice. Furthermore, due to national and legal requirements, some accessories may not be available in local markets. For further information in these respects, please contact your local dealer or visit [www.scania.com.my](http://www.scania.com.my)