

ISSUE 20 Q4, 2019
RM8.00

ASIAN BUSES

www.asianbuses.com



ISSN 2289-8921



9 772289 892003
KDN PP18692/03/2015 (034159)

SOUTH EAST ASIA'S LARGEST COMMERCIAL VEHICLE EXHIBITION

Back in 2021. Apply for a booth now to avoid
disappointment! Contact us via
info@asiantrucker.com





Organised by



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

CONTENTS



06 - EDITOR'S NOTE

MARKET UPDATE

- 10 - Hino Poncho Goes On Trial
- 11 - Another One Goes Green: Perdana Group Signs Scania's Maintenance Contracts and Ecolution Partnership
- 12 - Shell Malaysia Wins Award for its Next-Generation Lubricant Solutions
- 13 - Sani Express Receives New Scania Buses
- 14 - Two-Eyed Collision Detection from Greensafety Technology
- 15 - Busworld Awards: More and Electric

EVENTS

- 16 - Bus Rapid Transit Conference
- 18 - Malaysia Commercial Vehicle Expo 2021

19 - EVENTS CALENDAR

COVER STORY

- 20 - Daimler Trucks Asia Electrifies and Automates

FEATURE STORY

- 26 - The Smart Alternative in OE Quality
- 30 - MAN is Driving into the Future at Busworld Europe

Hengst[®]
FILTER



Work smarter.

Filters and lubricants in OE quality



Hengst Asia Pacific | 25 Bukit Batok Cres. | #10-10 Elitist | SG 658066
T +65 6818 2880 | E info@hengst.de | [f](#) HengstAPAC

CONTENTS



SAFE ROADS

- 34 - Real-time Driver Fatigue and Distraction Prevention Technology

LAUNCHES

- 36 - TMS Bus Launching and Handover Ceremony

THOUGHT LEADERS

- 38 - Volvo Buses see Interesting Opportunities in Prospering Cities Around South East Asia

FACILITIES

- 40 - Daimler India Puts the Incredible into the Bus

CAPTAIN OF THE MONTH

- 42 - Life's Little Joys

TECH TALK

- 44 - Fully Converted from Diesel within a Week

- 45 - HEADLIGHTS

- 46 - NEWS & NOTES

ContiCoach HA3

GENERATION 3. DRIVEN BY YOUR NEEDS



Continental Generation 3

EXCELLENT



Mileage



Wet Braking



Fuel Efficiency



Continental Tyre PJ Malaysia Sdn. Bhd. (4296 K)
3rd Floor, 2 Jalan Tandang, 46050 Petaling Jaya, Selangor, Malaysia.

www.continental-tires.com/transport



The evening before the departure looked fine. However, on the morning of my departure, the bus was badly shaken on to way to airport. Wind gusts and heavy rainfall made it a long and stressful journey. More so for the poor bus captain. A typhoon had swept in and eventually, highways were closed. Although a tested and proven vehicle, the bus could not get me to my destination.

More Options

Having made it through all this, I was welcomed back to Malaysia. Here some serious discussions took place and I was delighted to be attending a number of the events. Volvo took to the stage to promote the idea of Bus Rapid Transit (BRT) Systems. Although weather patterns may not play such a huge role, getting these operating at peak performance is not as easy as one might have thought. Here, I learned that electro mobility may not be the key determining factor in how to plan a BRT. Which was an interesting thought as learned that Malaysia’s government has committed to buying 500 electric buses in the coming year. These could possibly be supplied by Terus Maju Services, which had a grand launching event where they announced their plans for electric buses to be sold here in the near future. Now, how do we combine these two?

Welcome Back!

The mini bus, which used to be pink (why pink????) in Malaysia seems poised to make a comeback. The Ministry of Transport recently took a closer look at the Hino Poncho as this nifty little bus is meant to address the needs of the last mile connectivity. I confess that I hardly take public transport. Not that I don’t want to, I just can’t get to it. Maybe, when there are more minibuses, I will be shifting my office to be on board a train or minibus. I also welcome back Mats Nilsson, who after a year in France is now heading Volvo Buses in Singapore. My first interview with him already points at ambitious plans he has for the region when it comes to buses. Lastly, I am also excited to let you know that MCVE is going to be back in June 2021. I am actually looking forward to managing the many things we need to sort out before we can open the doors to the fifth exhibition we organise.

Drive safe, electric or with Diesel,
Best Regards

Stefan Pertz
Editor, Asian Buses

In Our Elements

I am, like anybody else, experiencing the various climatic effects when travelling. When I move between countries I will be exposed to various weather conditions that will have an impact on me and my work. Mother nature is a very powerful force that we have no control over. And even where we are trying to counter adverse effects, we are just passengers.

Shaky Results

During my visit to FUSO in Japan I was made aware of this in more than one way. When I visited the sacred halls of the quality control department, I was shown a giant pendulum. It is used to demonstrate that in Japan there are constant tremors, the earth is quaking non-stop. What looks like a cool gimmick is actually serious business. The spikes in movement of the earth may impact the test results in the quality lab. As explained by Mr Moebius, the team can correlate the earth’s movement to any test result and see if any earthquake may have tainted the test results. Imagine that! How far we have come in production methods that we will know that there is an issue with a specific part because mother nature made her presence felt.

Swept Off the Road

As I was trying to get out of Japan on that particular trip, I was yet again fascinated by how weather can impact us.

GUARDIAN

SOUTH EAST ASIA

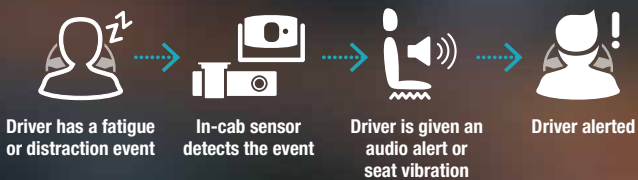
REAL-TIME DRIVER FATIGUE AND DISTRACTION ACCIDENT PREVENTION TECHNOLOGY

Guardian by Seeing Machines uses sophisticated eye & face tracking algorithms to detect when you're fatigued or distracted behind the wheel and provides immediate in-cab alerts to prevent an accident from occurring.

- 24/7 protection for you and your passengers on the road
- Alerts you of signs of fatigue to prevent an accident from happening
- Allows management to minimise risk and improve working conditions
- Ensures a safer workplace to get you home safely

Guardian is not a CCTV and respects your privacy.

HOW IT WORKS



To learn more about Guardian, please contact:

Guardian South East Asia

E. sales@guardiansea.com

T. Jeff Tan +6012 772 6578

T. Vincent Cheong +6018 965 1883

T. Bosco Teo +65 8798 8470

Malaysia

Level 28, The Gardens South Tower, Mid Valley City,
Lingkaran Syed Putra, 59200 Kuala Lumpur, Malaysia

Singapore

Vision Exchange, 2 Venture Drive, #13-08, 608526 Singapore



seeingmachines

GUARDIAN

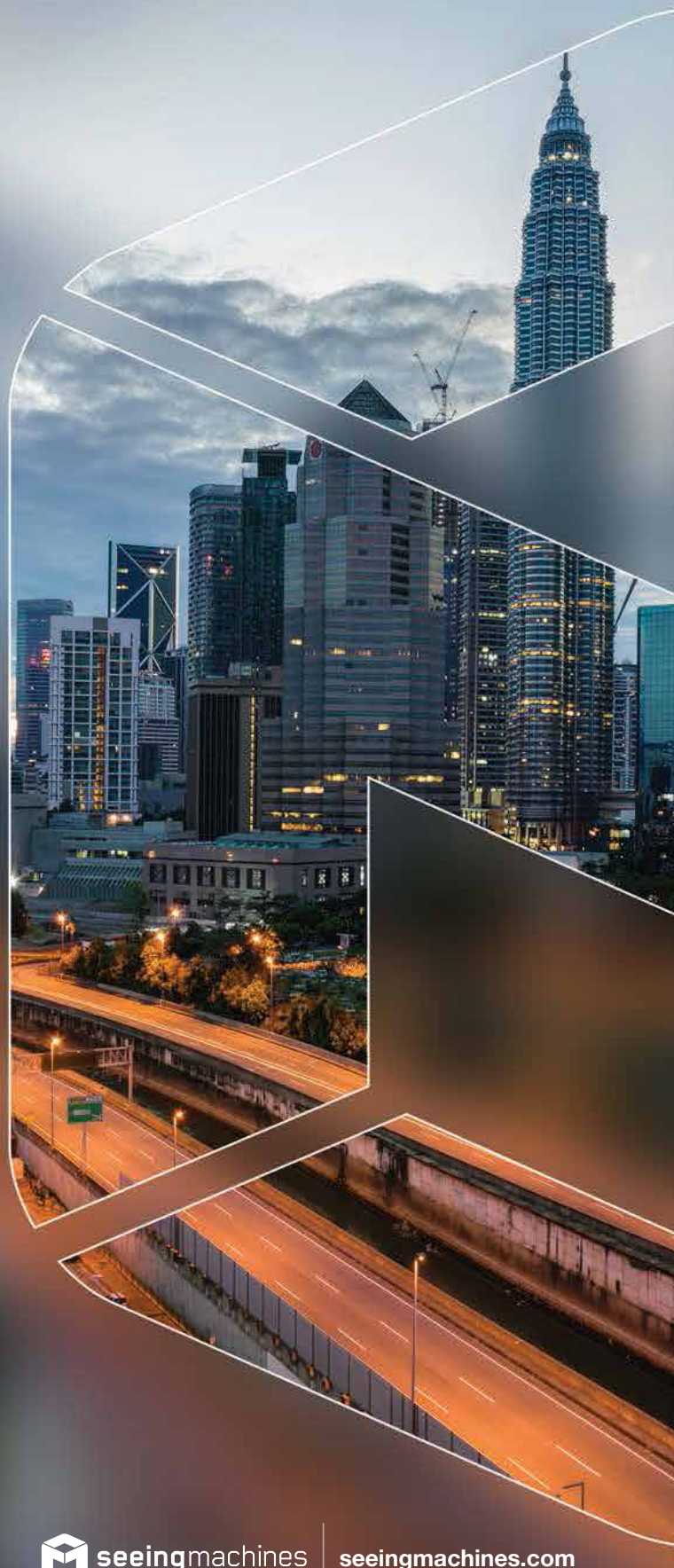
AUTHORISED
DISTRIBUTOR

guardiansea.com



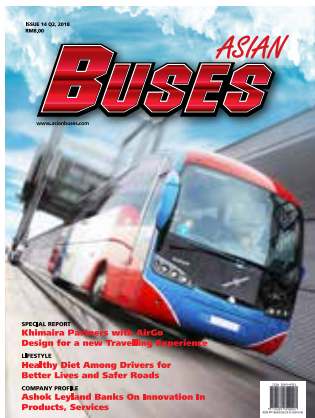
seeingmachines

seeingmachines.com



The Drivers **ASIAN BUSES**

**YOUR GUIDE TO
ALL THINGS BUS**



**PDF versions
are available for
download at
www.asianbuses.com**

EDITORIAL

EDITOR Stefan Pertz

WRITERS Carol Yeoh

GRAPHIC DESIGNER Tony

PHOTOGRAPHERS Floyd Cowan

Carol Yeoh

Songyot Kamontavikun

Stefan Pertz

CONTRIBUTORS Floyd Cowan

ADVERTISING

Nicole Fong

Nicole@asiantrucker.com

SINGAPORE

Floyd Cowan

Floyd@asiantrucker.com

THAILAND

Songyot Kamontavikun

Songyot@asiantrucker.com

ON THE COVER

Busworld Europe 2019

CIRCULATION, CONTRIBUTIONS and SUBSCRIPTION

info@asiantrucker.com

WEBSITE and E-NEWSLETTER

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 to put your company on speed.



MAN | Service

012 - 225 8626



PARTS WARRANTY



ECOLINE PARTS

MAN | Mobile24

1- 800 - 22 - 8626

Simplifying Business with MAN

Integrated solutions to simplify your business

Our comprehensive range of services in MAN After Sales cover everything – from 2-year warranty, preventive maintenance, ServiceContracts, MAN Genuine Parts ecoline, quality training and more. So, you can focus on your business and we'll do the rest.

MAN After Sales – it's easy because we make it easy.

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

MAN kann.





Hino Poncho Goes On Trial

Transport Minister, Anthony Loke took a ride on the minibus.

Hino Motors Sales (Malaysia) Sdn Bhd (hereafter known as HMSM) previously introduced the Poncho, a seven-metre ultra low-floor minibus at the Malaysian Commercial Vehicle Expo (MCVE) a few months back. Now, Rapid Bus Sdn Bhd will be trialling the Hino Poncho for three months from 20 October 2019 to 20 January 2020. The trial run will cover routes T784 LRT Taman Bahagia and T201 LRT Gombak.

The Hino Poncho is the world's first seven-metre low-floor minibus. In Japan, there are more than 2 000 units of the minibus in service. Outside of Japan, Malaysia is the first country in Southeast Asia to integrate into its public transportation fleet. The low floor minibus is well adapted to complement Malaysia's existing public transport system in the city and suburban areas.

The trial run is an initiative for the development of an efficient intra-city bus service which will shuttle passengers from transport hubs to their final destination within the central business district as well as residential areas. HMSM saw the need of a vehicle to service the first and last mile connectivity with an added advantage of manoeuvrability to service narrow roads in residential areas. The Hino Poncho ticks all the boxes.

Accessibility features of the Hino Poncho include an ultra-low floor with kneeling function that can be further lowered down. This will be especially helpful for senior citizens and disabled passengers. Besides that, it is able to cater up to 31 passengers including standing passengers. Designed

with a vehicle height adjusting system, the vehicle can be lowered and lifted to suit the situation. The height can be lowered by 50mm which will enhance boarding and alighting at bus stops whilst the vehicle can be lifted 30mm higher to improve drivability on rough roads.

HMSM and the Rapid Bus believe that the trial run will prove to be an efficient part of the public transport system as well as improve transit experience. The Hino Poncho will be able to eliminate the first and last mile barrier that was plaguing the public transportation system for years. 🚗

Another One Goes Green: Perdana Group Signs Scania's Maintenance Contracts and Ecolution Partnership

Perdana Group is the most recent company to have joined Scania's fleet in the drive towards reducing the carbon footprint.

As of 27th November 2019, Perdana Group, express bus operator of Perdana Express, Darul Iman Express and Lienadia Express, took towards environmental-friendly initiatives with Scania Group Malaysia by signing Maintenance, Repair & Maintenance Contracts as well as the Ecolution partnership for 78 of their buses, as a joint effort for a greener and safer Malaysia.

Held at the Terminal Bersepadu Selatan in Bandar Tasik Selatan, the signing ceremony was officiated by Tuan Haji Laili Ismail, Managing Director of Perdana Express, and Marie Sjödin Enström, Managing Director of Scania Southeast Asia.


In conjunction with the signing of the Maintenance contracts and Ecolution partnership, Perdana Group also added 31 Scania buses across their three express bus lines as a means to expand their services to the Northern region, namely Tanjung Malim and Parit Buntar, as well as strengthen their services between the East Coast and the Central Region. "Investing in more Scania buses is a testimony of our trust and faith in the performance and reliability that Scania has given us for more than a decade when we started this business," said Haji Laili.



The new K410EB6X2 buses come equipped with Scania Opticruise, full air suspension, electronic braking system (EBS), Scania Retarder, and traction control. Other features include hanging pedals and a fully adjustable steering wheel, as well as a higher torque at lower revs engine. The K410EB6X2 will thus prove to provide a safe and comfortable ride for long distance travels while remaining fuel-efficient and minimising impact to the environment. With that, Perdana Group now owns a total of 101 Scania buses out of the 113 units in their current fleet.

Perdana Group has been a customer of Scania Malaysia's since 2010, and Sjödin Enström stated, "We are very proud to be deepening the relationship with Perdana, and moving in the right direction for us, for Perdana and also for Malaysia from an environmental perspective." The signing and handover ceremony were both a step towards Scania's far-reaching 2050 commitment in reducing the carbon footprint to net zero. She also added, "We will continue our drive to make a difference as we go. We understand that we are a part of a problem, and we need to be a part of the solution for that problem for the future."

As part of the company's sustainability efforts to reduce fuel consumption and consequently their CO2 emissions, Perdana Group signed the whole fleet onto the Ecolution partnership as well, starting with 22 buses as pilot and expanding from thereon. The Ecolution partnership is a tailor-made agreement made to maximize fuel efficiency through ongoing driver training, digital coaching, as well as vehicle and fleet optimization, as complemented by the tools and services provided by Scania.

Established in 2009, Perdana Express has built itself to be one of the major bus express companies in the country, having won the Land Public Transport Agency's (SPAD) Best Operator Award in 2016 and 2017, as well as Best Customer Service Award in 2017. The well-established company provides bus services that covers the East coastal states of Kelantan, Terengganu and Pahang; the Northern states of Kedah, Penang and Perlis; the central states of Selangor, Wilayah Persekutuan, Negeri Sembilan and Melaka, and the Southern region of Johor. 



Shell Malaysia Wins Award for its Next-Generation Lubricant Solutions

The inaugural Malaysia Technology Excellence Awards 2019 has awarded Shell Malaysia Trading Sdn Bhd for introducing next-generation lubricant solutions for its business-to-business (B2B) customers that incorporated artificial intelligence (AI), mobile applications and wearable technology.

The Malaysia Technology Excellence Awards was organised by Charlton Media Group of Singapore and recognises exceptional companies from across different industries in Malaysia that have embarked on innovative technology-driven initiatives that positively impacted their businesses.

Shell Lubricants General Manager for Malaysia and Singapore, Baljit Singh, said that the awards recognised Shell's continued technology leadership in lubricants.

"As the top lubricants supplier in the world for the past 13 consecutive years, Shell has been at the forefront of research and development that includes deploying the latest technology to create enhanced products and services that deliver tangible benefits and long-term value to businesses," he said.

Shell Malaysia's award-winning initiatives include:

1. Shell LubeChat: Shell's online AI-powered chatbot operates 24 hours with machine learning capabilities that provide customers with accurate solutions in a timely manner to make faster, better-informed decisions regarding the right lubricant for every type of equipment or application. Its customer support capabilities range from basic enquiries to trouble-shooting and solution-driven conversations. It even provides technical documents for reference, an initiative taken by Shell to communicate more efficiently with its customers.
2. Shell LubeAnalyst: Available in a convenient mobile application, this data-driven diagnostic tool hosts millions of data points that date back to 30 years and cover more than 700,000 components on its cloud-hosted database. Shell LubeAnalyst has proved to be invaluable in helping determine the 'health' of both lubricants and equipment to avoid unplanned downtime. The mobile application makes it easier to register oil samples and access necessary information. Customers can submit samples using QR codes from virtually any location, thereby eliminating manual, paper-based processes and minimising risks of human error. This service has enabled Shell industrial lubricants customers to reduce total costs of ownership of heavy machinery.
3. Shell Wearable Technology: Shell's introduction of wearable technology enables its technical field personnel to conduct on-site equipment inspection and communicate remotely in real-time with other Shell technical experts in Malaysia and other parts of the world for accurate diagnosis and prompt resolution. The wearable headset is equipped with a camera capable of capturing still images and projecting 'live' video feed, a microphone and a high-resolution micro-display screen. It is completely hands-free, voice-activated and rated for use in restricted zones where potentially hazardous materials are present. 🚧



Sani Express Receives New Scania Buses

The buses will be used to refresh the fleet.

Sani Express Sdn Bhd (hereafter known as Sani Express) received 23 new Scania buses in a handover ceremony held at Terminal Bersepadu Selatan in Bandar Tasik Selatan, Kuala Lumpur. In his speech, Wan Mohd Iskandar Dato' Salleh, Managing Director of Sani Express Group said "It is important for us to refresh our buses every five years in order to provide our customers with the best service and Scania buses have proven themselves to be the right vehicles for our passengers. The new Scania buses would give us the opportunity to continue providing our customers with comfortable and worry-free travel."

Sani Express is a major express bus company that was established in 2006. They ply close to 30 routes across the northern and eastern region Peninsula Malaysia such as Kuala Terengganu, Kuala Besut, Kota Bharu, Kuantan, Alor Setar, Kangar and Kuala Perlis. The company owns 45 Scania buses in their fleet and has been a loyal customer of the Swedish marque since 2008.

At the hand over ceremony, winners of the Sani Express New Bus Contest were given the opportunity to present their winning pitch. Ahmad Rif'at Abdul Rahman said, that "As a loyal customer of Sani Express, I would like to thank Sani Express for offering the best experience to its customers. Besides providing us with a comfortable ride, the initiative by the company to constantly refresh its fleet to ensure a safe journey is greatly appreciated. I will continue to use their services for my journeys."

Sani Express has purchased Scania's K410EB6X2 buses that are equipped with Scania Opticruise function, low noise levels with full air suspension for unparalleled comfort, electronic braking system (EBS), Scania retarder, traction control, better fuel control with a higher torque at lower revs engine, fully adjustable steering wheels and hanging pedals for the comfort of the driver. The company also subscribed to the Fleet Management System Control 5 package and Scania Driver Training. These features along with the subscribed packages result in a bus that is safe, comfortable and fuel efficient for long-distance travel with minimised impact to the environment.



In addition to that, the company also signed up as a Scania Ecolution partner as part of their sustainability efforts to reduce fuel consumption and CO2 emissions. The partnership focuses on reducing operating cost which translates to improved profitability while fulfilling the growing demand for green initiatives.

On the day of the ceremony, the new Scania double-decker bus was used to ferry customers to Kuala Terengganu. Both Wan Mohd Iskandar and Marie Sjodin Enstrom, Managing Director of Scania Southeast Asia boarded the bus to deliver some gifts to the passengers. They explained to the passengers about some of the new features on the bus. Passengers remarked that the seats were more comfortable and looked forward to the long journey ahead. 🇲🇾



Two-Eyed Collision Detection from Greensafety Technology

Taking collision avoidance systems to the next level, Antonio Wong, CEO and Co-founder, Greensafety Technology Limited, took time out of his busy schedule to meet with Asian Trucker to explain how his system works and where the advantages are when opting for Greensafety Technology.

Making the Cabin Safe

Hong Kong based, Greensafety Technology Limited was established four years ago. Wong describes the purpose of the firm as providing road safety systems to corporate clients. Realising that there are a lot of commercial vehicles on the road that do not have the latest collision avoidance systems on board, he saw an opportunity. To address this, the solution includes the hardware and software to enable achievement of one objective: better protection to drivers of commercial vehicles. A warning signal will be sounded to alert the driver to react and take appropriate actions should a foreign object is detected to be too close to the front of vehicle. The system would also produce a warning signal if a driver changes lanes without signalling. "Commercial drivers today are constantly facing sudden and unpredictable road conditions, many of such are hazardous by nature to both the drivers and other users of the road. Our solutions are invaluable additions to their workspace," Wong said. As Hong Kong is a relatively small market compared to other ASEAN marketing, Wong and his colleagues are now looking to expand throughout the region through development of channel partnership with local players. Wong sees Malaysia as a hub for road safety equipment.

Ready to Serve

Development included the chipset as well as the algorithms that run in the system. The company supplies to both, the OEMs as well as the aftermarket where fleet owners may want to retro fit such an appliance. Besides the alerts to the driver, the IoV (Internet of Vehicle) solutions will gather data to be uploaded to the cloud. There, all the driving data is stored and analysed. Fleet managers can see which drivers are safe drivers and which ones are driving more dangerously. In Hong Kong, the two devices needed cost around HKD 12 000 and come with a one year warranty. Currently, some 500 trucks are equipped with the system. "However, next year we will see a massive jump in these numbers as we are supplying to truck OEMs, who will install our sensors as a standard." These sensors will used to power the automatic braking systems.

Not being Mean is Green

In his view, systems like his are very valuable as they help reduce accidents. That in turn has economic benefits as a company would reduce downtime, enjoy reduced insurance premiums and furthermore have a better reputation in the market. "When drivers operate their vehicles in a safer way, then they are also more fuel efficient. This is reflected in our company name. However, the green aspect is a result of the enhanced safety," he said.

Why Two is Better than One

Asked about the advantage of his system, Wong points out that their technology uses two cameras for the detection of objects in front of the vehicle. He explains that a system using one camera would be based on a database of images. If the image is not in the database, it would not be recognized. His application works like the human eyes, whereby the two cameras are able to establish the distance of objects and their sizes. For example, a system based on one camera would only recognize a bridge that is in the database. Wong's however would not need to recognize the object as a bridge, but rather, it would detect an object ahead and alert the driver if the vehicle wouldn't fit under it. Also, since the system does not have to tap into the database and constantly compare images, it is faster. ■



Busworld Awards: more and electric

Traditions are there to be respected. Every Busworld Europe edition comes with a Busworld Awards, formerly called European Coach Week (ECW). That was no different this year, but the decor was more majestic than before: the Atomium.

More than twenty vehicles which are used for all kinds of tests in all sorts of categories gathered around the most famous monument in Belgium. The predominance of buses, mainly electrically powered, was striking, apart from the large number of participants. An international jury judged each car down to the last bolt. Those who eventually won the highly desired Busworld Awards are immediately recognizable by the stands of the winners at Busworld itself.

Ten Busworld Awards were awarded in the bus and coach category. The Grand Award Bus went to the hydrogen-powered Van Hool Exqui.City 18, the Grand Award Coach went to the Volvo 9900. The jury ranked the VDL Futura FHD2-135 and the Van Hool EX11H 2nd and 3rd.

During this edition, the members of the jury observed some general trends. Yutong and, by extension, all Chinese manufacturers have made significant progress in general and already meet European standards in many areas. A second observation concerns the guide facilities.

The Tour guide media have been greatly improved with the availability and user-friendliness of connections is improved: multimedia, WIFI, laptop connection and mobile devices with screens and sound are improving significantly.

A third observation: cameras are replacing mirrors. This is beneficial for maneuvering and safety reasons. Finally, the vehicles with an alternative powertrain (electric, gas, fuel cell) were all of a very similar quality and level.

Grand Award Bus for Van Hool Exqui.City 18 FC Design Pau

The Grand Award Bus was awarded to the **Van Hool Exqui.City 18 FC** hydrogen/fuel cell bus destined for the

southern French city of Pau. The jury praised the safety features, the completely separated driver's desk with centrally located controls, the excellent visibility for the driver and the multitude of cameras covering the entire external area of the bus. In addition, this trambus was awarded the Ecology Bus label for its greater autonomy in comparison with electric vehicles.

The Comfort Bus label was awarded to the **Mercedes-Benz eCITARO** for its highly ergonomic approach to the driver's desk, the space, the accessibility of everything, the display and the equipment.

The **Yutong U12** was awarded the Bus Design label thanks to its European level of design, as well as its high score with regard to the aesthetic balance of the interior and its overall appearance on the outside.

The **MAN Lion's City 12G** was praised due to its extensive passive safety features for the driver, the acoustic blind spot warning, the mirrors displaying the entire front of the bus and the overall high ratings for other safety aspects for the driver and passengers in general. All of these features suffice to award the newcomer the Safety Bus label.

Overview Busworld Awards Winners

BUS

- Grand Award Bus: Van Hool Exqui.City 18 FC Design Pau
- Comfort Label Bus: Mercedes-Benz eCitaro
- Safety Label Bus: MAN Lion's City Hybrid
- Design Label Bus: Yutong U12
- Ecology Label Bus: Van Hool Exqui.City FC Design Pau

COACH

- Grand Award Coach: Volvo 9900
- Comfort Label Coach: Van Hool EX11H
- Comfort Label Coach: Setra Topclass S 531 DT
- Design Label Coach: Yutong T13
- Ecology Label Coach: Yutong ICe12
- Safety Label Coach: Volvo 9900



Bus Rapid Transit Conference

Volvo put a spotlight on BRT Systems when the brand hosted the inaugural Bus Rapid Transit Conference in Malaysia. Stefan Pertz shares the learnings from this event.

The joint organisers of the “Bus Rapid Transit Conference” – Volvo Buses, Technology Depository Agency (TDA) and Prasarana Malaysia Berhad – welcomes over 250 delegates to the conference which took place Tuesday on 19 November 2019 in the Le Méridien Hotel Putrajaya.

Aiming for Improvement

The main aim of this conference was to bring together key stakeholders from across Malaysia, who will converge together to build a shared vision and to discuss strategy and actionable plans on how BRT can be a logical solution within Malaysia’s integrated public transportation blueprint. Blending global insights with local experiences, this conference will seek to address how Malaysia can build smart, sustainable and attractive Bus Rapid Transit systems. This conference was an Industrial Collaboration Programme (ICP) initiated by Volvo Buses and supported by the Malaysian Government, Swedish Embassy and Business Sweden. It was officiated by YB Tuan Anthony Loke Siew Fook, Minister of Transport, Malaysia, who delivered a speech, praising the effort and urging operators to embrace BRT as a means to address the increased demand for transportation within the country.

BRT for the People

In his address, Loke stressed that the government (of Malaysia) is committed to investing in public transport infrastructure that includes rail and buses. “Having good infrastructure, and in the case of BRT Systems, having reliable and high quality buses is important. But that alone is not sufficient for us to build a modern, inclusive and world class public transport system as aspired to by the government and demanded by the people,” he said. In order to do so, all players involved need to acquire knowledge on how to operate the services in an efficient way. Bus captains, staff and transport planners must be well trained to do their job well. Loke therefore applauded the effort made by the organising committee and urged the delegates present to utilise the conference to absorb as much knowledge as possible.

Collaboration Needed

During a press conference, Akash Passey, Senior Vice President, Business Region International, also updated on issues happening within Volvo Buses.

One of the developments that Volvo has observed is that over the past 50 years, the way business is done

has changed. Previously, individual players would do individual things. However, with the Internet of things and the omnipresent availability of information around the world, Volvo clearly sees that they have to make BRT Systems a success. "BRT is not a new name, we have first introduced it in 1974 in Curitiba, Brazil in South America. Even though households have one or two cars, usage of public transport is at 80 percent." Passey said that the Volvo group aims to increase collaborations and communications with stakeholders in order to achieve higher BRT penetration globally. According to him, the implementation of BRTs has slowed down in Asia, due to a lack of collaborations between the parties involved in setting up such systems. "The key partners are the government, financing, operators and the providers of the hardware, the buses. That said, public acceptance is crucial," he said further.

BRT in Focus

Bus Rapid Transit systems have been in use for decades now and it is generally agreed that these systems have several advantages over other means of mass transportation. More flexibility compared to trains for instance or the relatively lower investment needed to put one in place. However, as easy as it may sound, the implementation of a BRT system requires careful considerations. Frits Olyslagers, Public Transportation / Institutional Specialist from Australia shared insights on this. These are some key pointers for communities considering BRT.

BRT is NOT a Product

BRT is an integrated set of measures to improve the standard of road-based public transport, including:

- 'quality' services,
- bus priority,
- sustainable business model, facilities
- managed risks, quality passenger information and
- it is not a single standard; various applications of BRT design principles can be adapted to the context of the City

In summary: It is not a 'cure-all', or an 'easy' solution

Key Features of Successful BRT

Designed in Context of the City

- Adapted to geography, demographics, culture and climate. A one-size-fits-all (top-down planning) approach will fail
- Is a product that is designed to 'win the market'
- Better chance of success (and easier to implement) if it is built upon an existing bus system
- BRT is integrated with land-use
- Be clear on how it improves access to the poor – with a clear plan (first/last mile access and fare policy/affordability)

A strong and capable institutional structure

BRT requires a strong institutional structure, to make consistent decisions at strategic, tactical and operations level: BRT requires a sustainable business model

Integrated into overall strategy

BRT needs to be set into a broad strategic policy framework and part of an integrated public transport network:

- BRT needs to engage a wide variety of stakeholders
- BRT needs to assess and be honest about risks



Design Principles that are clear and measurable

Objective	Understanding	Example of design guidelines	Measurement
Mobility	To provide a public transport system with adequate network coverage so mobility can be achieved for a large segment of travel requirements without using private modes. Has potential to free up road space.	High frequency service Bus priority Balance traffic treatments*	Increase in mode share and ridership and maintaining efficient general traffic speeds.
Accessibility	Greater access to employment, education and services through an integrated and connected system of para-transit and bus to provide easy travel options to a wide variety of destinations. First/last mile issues to be considered.	First /last mile services and technology for 'whole of trip' planning	Evaluate the network design for connectivity (directness of travel and minimal transfers).
Environment	To balance road use and manage travel efficiently, reducing traffic congestion, noise, respecting public space and improving walkability and reducing air pollution and greenhouse gas emissions. Making a pleasant city to live in.	Green bus technology Emission standards People-friendly designs and landscaping	'Quality of Life' indicators and air quality measurement against baseline indicators.
Reliability	Relates to missed trips and passenger waiting time to ensure a level of service where public transport passengers do not suffer time inconvenience.	Management for accurate bus schedule performance	Benchmarks of operator performance as a contract specification (enforceable).
Safety	Reduction of accidents and injuries, through providing safe public transport. Safer environment for pedestrians (separate walking from traffic)	Safe infrastructure and safety management	Improvement in accident statistics

*To ensure that the benefits of BRT are not cancelled out by worsening traffic congestion



Malaysia Commercial Vehicle Expo 2021

Making it a decade, the Malaysia Vehicle Expo is back for the fifth time, biggest in South East Asia again.

The Malaysia Commercial Vehicle Exhibition 2021 (MCVE) is going to be held from 17 to 19 June 2021. As a venue, the organisers have chosen yet again the Malaysia International Exhibition and Convention Centre, MIECC, which is connected to The Mines complex.

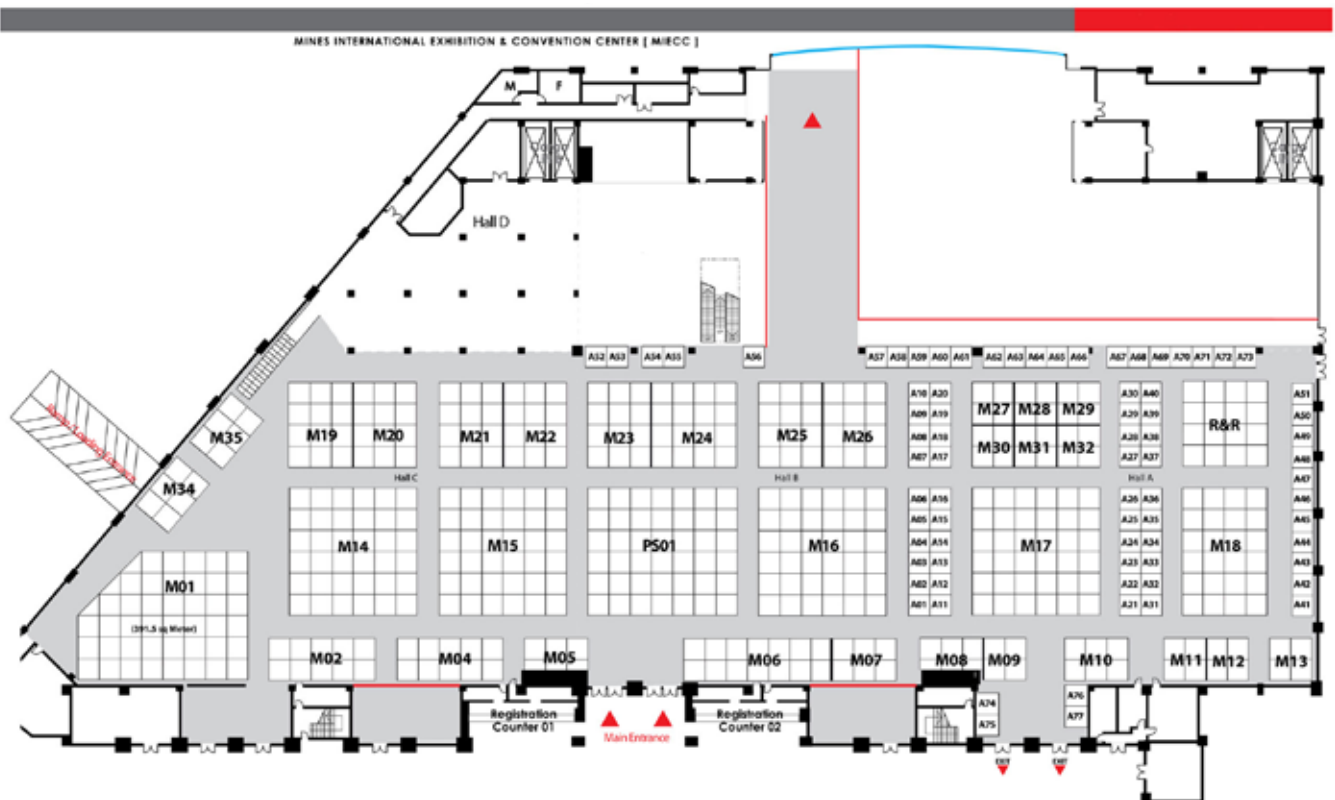
“Our last event has been a resounding success. Many of the exhibitors in the 2019 expo have been part of the event since the first one in 2013. There are too many to name all those, but in summary, MCVE typically attracts the creme de la creme from both, providers to the industry and their users,” said Stefan Pertz, Organiser of MCVE. According to him, the venue was chosen for several strategic reasons. For instance, connectivity is superb and the infrastructure of the halls supports an event like this.

At the time of writing, the event was already 60 percent sold, whereby several exhibitors of the 2019 instalment have secured the same spots again. “Seeing how good the response is, we are contemplating to open up more space. That, however, will only be done once we have run out of

space and there is enough demand so we can add these exhibitors,” Pertz explained.

During the event, organisers will sprinkle networking events, seminars and other activities to make it a lively and educational event while showcasing the latest in transportation technology, parts and services and not to forget, buses. Adding value to exhibitors and visitors alike, the organisers understand that one cannot simply place products in a hall. “There needs to be interaction and several different ways for people to get to know the brands on display. We have, over the years, had many such events whereby it is about trade facilitation beyond the obvious purpose of the event.”

Seeing that there has been a fast uptake of the spaces, the organisers recommend interested parties wanting to be exhibiting in the 2021 event to book their slots soonest to avoid disappointment. More information can be found on the official website www.mcve.com.my



LAYOUT PLAN

Events & Exhibitions

ROADS & TRAFFIC EXPO THAILAND 2020

Date : 12 February – 13 February 2020

Venue : BITEC, Bangna, Thailand

Contact Info: Valerie Lim at +65 6322 2766 / valerie.lim@terrapinn.com

Details : Supporting the sustainable development of the nation's transport infrastructure is a key focus of Thailand's Ministry of Transport. In line with the Thailand 4.0 vision, the 20-year National Transport Infrastructure Investment Plan 2017-2036 is geared towards achieving transport efficiency, and creating green, safe, inclusive and innovative transport. By harnessing the power of digital technologies, and building out and renewing transport networks and systems, the government is making unprecedented acceleration in making Thailand a hub for connectivity.

To drive greater public infrastructure investment and increase investor confidence, the government has also rolled out its Transport Infrastructure Investment Plan, which is linked to the 20-year National Strategy and the 12th National Economic and Social Development Plan, and emphasises transport modality shifts, increased connectivity, and enhanced mobility.

EVM ASIA 2020

Date : 24 March – 26 March 2020

Venue : MITEC, Kuala Lumpur

Contact Info: support@ambtarsus.com

Details : Malaysia will host the region's first international exhibition dedicated to the manufacturing of electric, hybrid and autonomous vehicles – EVM ASIA 2020, from 24-26 March 2020 at the Malaysia International Trade and Exhibition Centre (MITEC), Kuala Lumpur. It is the RIGHT PLACE and TIME for suppliers of machinery, equipment, parts and components, software, systems, applications and e-mobility solutions to showcase their products and services as automotive manufacturers are gearing up their facilities for electric and hybrid vehicles.

EVM ASIA 2020 is the event to unveil the Future of Mobility Technology



THE 8TH INTERNATIONAL EXHIBITION AND CONFERENCE ON RUBBER INDUSTRY AND TYRE MANUFACTURING

Date : 17 June – 19 June 2020

Venue : Saigon Exhibition and Convention Center (SECC)

Contact Info: +84 28 3848 8561 Fax. +84 28 3848 8564

Email: info@veas.com.vn

Details : Rubber & Tyre Vietnam 2020 is one of the most attractive annual international events in Vietnam. This will be a chance to all the coating enterprises for not only meeting and exchanging values and experiences but also finding opportunities to co-operate with a lot of both local and abroad companies reliably.

Rubber & Tyre Vietnam 2020 will focus on these main areas: Rubber Raw Material, Machinery Technology for Rubber Processing and Rubber related products - especially Tyre. Beside, Rubber & Tyre Vietnam 2020 will establish application of new technology, new product and materials which meet the demand of improving production from advanced countries to Vietnam market.

MALAYSIA COMMERCIAL VEHICLE EXPO 2021 (MCVE)

Date : 17 June – 19 June 2021

Venue : Mines Exhibition and Convention Centre

Contact Info: info@asiantrucker.com

Details : Back for the fifth time, Asian Trucker invites you to be part of the largest dedicated exhibition for commercial vehicles in Southeast Asia. Following the success of the past events, we are returning with the show in June 2021 with plans to expand the space.

Buyers, purchasers and operators have the opportunity to review the latest offers in terms of trucks, busses, services and components. During the show, relevant government agencies, professional societies, and associations will join the organizer to hold seminars and updates on their products, services and the latest in trucking.

IAA COMMERCIAL VEHICLES 2020

Date : 24 Sept – 30 Sept 2020

Venue : Deutsche Messe, Hannover, Germany

Contact Info: iaa@vda.de

Details : Vans, buses and trucks – commercial vehicles are a major part of our lives. Today we can choose from an extensive range of goods worldwide that are delivered right to our doors. This would not be possible without freight transport and logistics. And it is the commercial vehicles that cover that last mile. They carry over 70 percent of transported goods and therefore form the backbone of transport and the economy. They are also service providers and chauffeurs. They dispose of our waste, help us to move house, assist the rescue services, take our children to school and drive us to work. So commercial vehicles actually keep our everyday lives "on the go."

The IAA Commercial Vehicles in 2020 will address the question of what the future of commercial vehicles will be like. The IAA takes place in Hannover and is the world's leading trade show for transport, logistics and mobility. And in fact the whole commercial vehicle sector is on a path of innovation. As in many other branches of industry, the particularly important topics here are automation and connectivity, safety and security, environmental protection, electric mobility, new logistics and traffic concepts for the towns of the future. It offers a unique cross section of the entire value chain in the industry, from vehicles to transport and logistics, and from manufacturers to the many medium-sized suppliers.





Daimler Trucks Asia Electrifies and Automates

The atmosphere was eclectic when we arrived in Kawasaki, Japan, which is home to the FUSO brand. After our visit to their India plant (We reported in Asian Trucker Malaysia issue 49), we were not just welcomed to what the organisers themed “Meeting FUSO”, but ushered into the innermost sanctum of any bus brand: their Research and Development centre.

Meeting FUSO

Although the brand is well known, a general introduction to discuss the history and structure was a welcome start into the three-day program, which was led by the top management of the Japanese make.

Mitsubishi-Fuso is part of the Daimler conglomerate. Their ambition, as a group, is to be the undisputed leader in the commercial vehicle industry. This is to be achieved through a push in innovation leadership, global market presence with platforms that meet market demands and a strong customer focus. Currently, Daimler products are available in over 170 countries, which is made possible also through the use of shared platforms, utilising a network of global resources. “This means that we can deliver the best and newest products to our customers and be the first to do so,” said Mr Hartmut Schick, President & CEO of Mitsubishi Fuso and the Head of Daimler Trucks Asia. Recently, the brand has shifted its focus for the vehicles to electrification and to connectivity.

Being a leader means different things. For instance, as a listed company, the company is being judged by its financial performance. Profitability is important for the shareholders. With that comes also sustainability, which is an important

Buses, test drives, Typhoons and the Tokyo Motor Show were among the highlights of an exclusive visit to FUSO in Japan where Stefan Pertz was also allowed into the innermost sanctum of the brand: their R & D Center.

aspect for business partners, such as the distributors and dealers, who have also invested in the brand. In terms of new technology innovation, Daimler aims to set the pace when it comes to future features, safety, reliability, efficiency and comfort. This also includes emission issues, which means that minimum requirements are to be met, or even exceeded. Profitability and technology are closely linked in the view of the FUSO management. If the company manages to incorporate better features, higher technology, also the profitability of the customer, the user increases.

Heavily Invested

While the brand has not yet written off the Diesel engine, as it is still one of the best suited means of propulsion for buses, major investments are being made to push for innovations in the area of alternative fuels. In specific markets, there is still growth potential to be realised with buses running on Diesel and FUSO is eager to further increase their market share there. Schick cited UAE and South East Asia as some of the markets that are in that cluster. In the coming years, 1.5 Billion Euro will be allocated to research and development annually. Of that, 500 Million Euro will be secured for the development of Level 4 Automated driving. According to Schick, this is required to ensure that customers will be offered the best possible solution.

The global network of design and development centres works both ways. This allows for faster developments and focus on certain components by individual centres. Currently, the E-Actros and E-Citaro are also undergoing trials with customers.

Uniformly Connected

Besides electrification, Daimler is also leveraging on connectivity. Utilising one common piece of hardware, all new vehicles are connected, and data can be gathered for further enhancements and improvements of the vehicles. During the presentation, Schick said that Daimler Trucks has sold over 300 000 connected vehicles that are connected via their various systems. "The benefits are clear: this will lead to less downtime through predictive maintenance."

Connectivity also enables autonomous driving. FUSO was showing a Level 4 autonomous driving Super Great at the Tokyo Motor Show. Currently, FUSO is waiting for legislation to be amended and implemented to regulate this new type of vehicles. One aspect that is likely forgotten by many though is the data security. The systems used need to be able to withstand hacker attacks that could result in harm to drivers and other participants in traffic. This, according to Schick, is one aspect that needs to be taken into consideration during the design process as well.



Holy Centre of Operations

It was the first time that a group of media representatives were allowed into the actual room in which the new buses are being developed and one could feel the pride in the new centre. Having heavily invested in upgrading production facilities, to the tune of 11.8 Billion Yen for the production line and another five Billion Yen have been earmarked for the refurbishment and relocation of the own retail network. Thus, as a result, the new centre brings together planning and production with increased efficiency. High tech allows for 3-D printing of models and parts, transfer of shapes from clay models to CAD programs and live designing of buses on a big screen. Aiding the development process is virtual reality, which allows to get an impression of what a vehicle would look like in real life when on the road.

The starting point for any design development is the customer. In regular engagements with clients Daimler analyses the requirements that users are having. The question asked is "What is important for the individual customer?" When it comes to individual solutions, the direction is clear: as a global player, Daimler offers products that are suitable fits for any market, however, prides itself with the ability to create individual solutions. Keeping the driver safe and offering a comfortable environment are major considerations for the design. These are the values of the company and highly important to adhere to when developing new designs. As a Japanese brand, the exteriors of FUSO vehicles are inspired by the local culture, such as Anime. Perhaps the most interesting approach to the new vehicle design is that the designers try to break new

ground. The mantra is that the designs need to be thought-provoking and that if a design is liked right away, then something is wrong. As Schick said, "A design may need to take two years before it grows on the audience and is liked after in-depth discussion and discourse."

Sales, Sales, Sales!

Daimler Trucks Asia is part of Daimler Trucks. In 2018, Daimler Trucks sold approximately half a million vehicles all over the world. Daimler Trucks Asia is present in Japan and India with production facilities and is able to offer a total of over 1 200 product variants when including the Bharat-Benz branded trucks in the portfolio. The offering, as clearly defined, is two-part: one is the hardware, the actual bus and the second part is the customer



service, the after sales. On top of that, Daimler offers customised financing for customers. Looking at the global footprint, Daimler maintains regional centres, production partners, distributors and dealers to ensure the widest as possible reach. Almost 60 percent of vehicles sold are configured in EURO 3 or above, thereby mostly exceeding the requirements of the markets. The challenge, as FUSO's top management sees it is to satisfy the market with products that meet the demand for more sophisticated transport solutions.

Efficiency, safety and comfort are the focal points when developing products to meet those demands. Efficiency means that the company is sharing platforms and knowledge in order to bring the best solution to a specific region or even customer. Safety features play a big role, especially now, where the company is pushing for autonomous driving. Functions to ensure safety are not just limited to protecting the driver, but also people and property outside the bus, for instance with sensors that detect and track cyclists and pedestrians. Lastly, the comfort of the bus directly impacts the performance of the driver and emphasis is given to making the cab as comfortable as possible.

Top Quality: Proven!

Connectivity is a key driver of developments, as evident in the vehicles of FUSO. However, the data gathered is not just used for platooning or to let the owner know where the vehicle is currently located, it also allows for





insights in the area of quality management. Letting us in on the work done in his department was Michael Moebius, Head of Quality Management Daimler Trucks Asia. "If we cannot demonstrate our approach, then we are not transparent. And if we are not transparent, we are not credible," he said as he invited a group of visitors to see how his team is working on ensuring how the brand maintains top quality levels. What sets Daimler Trucks apart from other manufacturers, according to Moebius, is the fact that the quality management team is involved in the entire process of producing the vehicles, including the design process. Thus, staff working in his department can react extra-fast in case of any issues as they are fully involved in every aspect of the manufacturing of the vehicles.

Within a short span of five years, the quality management has made tremendous changes when it comes to data analysis. What was once done on Excel sheets has long since moved to Big Data Analysis and further to Big Data Telematics today. The objective was to create a system for the early detection of failures with the tangible benefits of reduction in warranty cost and improved customer satisfaction as a result of reduced downtime. This is achieved by using warranty claims, service history and product quality reports and running it through a set of analytical techniques. The output is many fold: real time diagnosis, batch prediction, statistical analysis and trend visualisation. "One relatively simple example these days is the battery discharge trend. We know what the battery charging and discharging behaviour is like when it comes to the end of its lifespan. We can then take measures to bring the bus in and to replace the battery before it fails," Moebius said. This, in his words, has moved his department from being reactive to being proactive.

Monitoring thousands of connected vehicles, via a multitude of sensors, the quality management team of Daimler Trucks Asia can effectively anticipate any issues that may arise in the buses that are out on the road. And not only that: if a part shows problems, the systems used can show every bus that is using the exact same part. Probabilities and extrapolations indicate the severity of the issue and guide the team in their following actions. Knowing where each vehicle is has helped them find stolen trucks and also to prevent severe damage to vehicles. In one instance an alarm went off, showing dangerous levels of oil pressure in one particular truck. The team called the driver, asking him to stop immediately. As it turned out, the owner

had decided to service the vehicle in-house, using an oil filter with the wrong specification. A major engine damage could be averted.

Testing! Testing! More than One-Two

True to his word, Moebius took visitors through the entire process of quality testing. "We are no different from Apple, say. We have a product that is designed in one place, manufactured in another and used in a third. While in theory, this all sounds easy, quality assurance is not!" In their test lab, parts are being artificially corroded for some time to simulate aging of parts, microscopic structures are being evaluated to ensure that the quality is as per specification and many parts are being examined to ascertain their worthiness for use. The team pulls out parts from the production at random and also asks for parts that have been in use for some time to be brought in for examination.

One of the things that makes this test lab unique is that Japan has constant earthquakes. One may not feel it, but the ground in Japan is shaking all the time. According to Moebius, this may affect the test results. To demonstrate this, a giant pendulum hangs in the lab, showing visitors that this is not just made up, but a constant problem for the quality management group. In case of more forceful tremors,

test results may be distorted. By monitoring the earths' movement using a seismograph, a cross reference to any test result is possible should any issue arise later on, thus linking any botched test to the impact that the moving earth may have had.

Testing on Track

As testing a lab does only allow for scrutinising parts and assemblies, the complete vehicle needs to be tested on the road. Daimler Trucks Asia maintains a proving ground just two hours outside Tokyo, where in a dedicated area, a team of 300 staff performs tests on finished vehicles. With all track combinations connected, the total length of the track is 14.4 kilometres. The facilities were set up in 1980 and now feature all the facilities to simulate real life driving conditions and beyond. Besides the track, some 170 test benches are housed in the proving ground to support the rigorous evaluation of the vehicles. The track has a six lane high speed track and a 5.3 kilometre long rough terrain track. Within Daimler Trucks Asia there are two test tracks, whereby the second one is in Chennai, India. Previously, each track would be used to test the vehicles made in the local market: the track in Japan for Mitsubishi Fuso and the one in India for Bharat Benz. However, recently, this has been changed and now both tracks are used to test any vehicle.

As the testing is taken to an extreme, the stress on the vehicle is increased, thus accelerating the aging of the vehicle. Within a short period of time, the entire lifespan of the vehicle can be simulated. However, as that would also result in the full load of stress over decades unloaded onto the driver, here a robot is used to drive the test vehicle. "We want to subject the vehicle to the stress test, not some poor human," said Hironobu Ando, Director, Head of Testing Asia, Product Engineering Trucks Asia, Head of Kitsuregawa Proving Ground.

His favourite test is the EMP chamber, where vehicles are tested in terms of their reaction to electromagnetic impulses and radiowaves. Further, the test is to show that the vehicles do not emit any harmful radiation. While this test has been introduced 10 years ago, only recently other manufacturers have started to use this method as well. Besides such extreme conditions, the proving ground has all the possibilities to simulate any conditions that the vehicles may be subjected to. "That said, while we can go to extreme conditions, we usually simulate what our customers are doing. Yes, things break in extreme conditions, but such conditions are the exception, not the norm. We need to test in real-life conditions." He explained that a test with a truck being driven for five million kilometres revealed some 700 failures that were not detected in the truncated tests in the extreme conditions of the proving grounds. In addition, the facilities offer the "Flying Doctor". In case a dealership cannot rectify a problem, the vehicle will be brought in for examination by experts.



Snapshot: FUSO Rosa

The model year 2019 Rosa has been upgraded with new safety features like AEBS (Advanced Emergency Braking System), ESP (Electronic Stability Program), and LDWS (Lane Departure Warning System) as well as EZGO & Hill Start Assist.

Specifications

- Model: BE740G
- Engine: 4P10(T6)
- Engine displacement: 2.998L
- Maximum engine power: 129kw (175ps) / 2,860rpm-3,500rpm
- Maximum torque: 430N*m (43.8kgf*m) / 1,600-2,860rpm
- Transmission: 6 speed AMT

Also Awarded: Aero Queen

The 2019 model year Aero Queen large coach bus won the Good Design Award. The vehicle combines a cutting-edge silhouette with technologically advanced features focusing on pedestrian and passenger safety.

The Aero Queen achieves safety, comfort and economy thanks to various in-vehicle safety devices. Besides these excellent safety features, its revamped exterior sports the new "Fuso Black Belt" design identity, as well as a new LED headlamp and fog lamp. The "Fuso



Black Belt," a new design approach that highlights the Fuso logo, adheres to Fuso's traditional brand history, including the V-shaped emblem. With this award-winning bus as a starter, the design approach will be applied to all Fuso vehicles that will be launched down the road.

Design Points

- 1 Design identity: Black Belt design with which Fuso products can be identified at a glance
- 2 LED headlamp: The characteristic signature lamp that highlights Fuso's identity also at night
- 3 V-shaped design: Fuso's traditional emotional design is inherited

Aero Queen large sightseeing bus

The model comes with a wide array of safety features, including Active Sideguard Assist, the first among domestic large coach buses, which monitors the driver's blind spot on the left side of the vehicle for safer driving, Emergency Driving Stop System (EDSS), which will automatically bring the vehicle to a halt if something goes wrong with the driver, and Active Brake Assist 4 (ABA4), a collision avoidance system with an additional pedestrian detection capability, thereby boosting driver assistance technologies significantly. ■



Hengst[®]
FILTER



The SMART Alternative.

OE quality and service excellence.



www.hengst.com/smart

The Smart Alternative in OE Quality

Hengst launches new campaign for the independent Aftermarket. Being a radical new approach, we wanted to know more in order to relay the insights to the market.

Brand-name quality is also of great value on the independent aftermarket for spare parts: Epitomizing superior dependability and economy, it lays the foundation for satisfied repair shop customers. Hengst has made these advantages the key focal points of a new communication campaign that is geared towards the Independent Aftermarket (IAM). Running the campaign under the motto of "The Smart Alternative", the filtration specialist summarizes all advantages to independent specialist companies that are associated with service parts in OE quality.

Brand-name products are of particularly great benefit in the area of vehicle repairs that are suited to current market value. Durability and high performance will pay off in the long run for wholesalers and for independent aftermarket repair shops and their customers. By contrast, outwardly "affordable" replacement parts are prone to lead to unscheduled downtimes, causing anger and frustration all around, due to their substandard quality or defects in the material.

Compare that to Hengst: As a development partner for a great many well-known automobile manufacturers, the company is in a position to offer to the independent market services of great quality and innovation that are on par with the services provided by the original manufacturers. Better yet, Hengst also boasts an exhaustive product selection that covers nearly all requirements thanks to its 2,600 filter applications and is promptly available thanks to the company's powerful logistics system. Hengst's promise of performance is capped by personal service and marketing as partners.

The slogan of "The Smart Alternative" is asserted by a new look which accentuates the distinctive "H" and the company colours blue and yellow as brand recognition features.

Asian Trucker spoke to Oliver Nabrotzky, Global Group Vice President Independent Aftermarket, to find out more about the motivations and benefits behind the campaign.

In their statement, Hengst claims that "outwardly affordable" replacement parts are prone to lead to unscheduled downtimes". They are not just saying so, but backing this with data and insights. At first glance, many products we use on a daily basis seem to offer us identical advantages - whether they are of brand-name quality or represent a generic, more affordable alternative.



If damage can be attributed to the use of substandard filters, the warranty granted by the automotive manufacturer is usually rendered void. This is a risk that can certainly be avoided by relying on filters in OE quality.

When selecting vehicle filters, however, you should always pay attention to quality - no matter if you buy an oil filter, fuel filter, air filter or a cabin air filter. Made from premium and temperature-resistant materials, these highly sophisticated products have a decisive influence on the performance and lifetime of your engine, fuel consumption, pollutant emission and air quality in your vehicle's interior.

"Our products - from small filter inserts to complex fluid management modules - are put through their paces by us. We have the most modern testing facilities at our disposal for this purpose (Asian Trucker reported in our Sep/Oct 2018 issue). For example, tests with inferior filters show a higher differential pressure in oil filters, which has an influence on increased fuel consumption." Nabrotzky stresses that collapse resistance is also an issue here. Apparently, they have already seen completely destroyed oil filters that get into the engine circuit and can lead to capital damage.

Fuel filters must reliably filter particles and water from the fuel, otherwise abrasion or erosion can damage the injection system or the distributor pump.

In air filter elements with limited media stability due to insufficient impregnation, the effective filter area is reduced and a breaking medium can lead to complete filtration loss. Stable media of a Hengst element with optimum impregnation prevent the pleats from being packaged, the filter surface is retained and the filter remains fully functional throughout its entire service life.

The term "SMART" in the context of this campaign is an abbreviation.

Hengst as a family business shows that continuity, value orientation but also flexibility, speed and innovation are the basis for success on the world market - and have been for over six decades. "We have worked out our competitive advantages and made them the key points of the new communication campaign. "SMART" as a further development of our communication forms the framework for our focus on our customers, which is already accepted in the market today." Nabrotzky explains further:

Each letter is charged with added value, which in turn sets us apart from the competition:

S stands for supply and means that we guarantee on-time delivery of the right products at the right place. On-time delivery and a global network of supply centers are our contribution to fast and dependable logistics.

M for margin describes our focusing on a win-win scenario. Protected regional sales territories and a strategy that avoids over-distribution helps for stable margins.

A as in attention means our customer focus. Service instead of unnecessary waiting times is our conviction. We live and breathe these principles every day and everywhere on the globe.

R like reliability expresses that our work does not revolve around investors or fund hunters who merely regard filtration as a means to widen their profit margin. As a family-owned company we live that business because it is our passion.

T for top-quality characterizes our stature as an OEM for the world's best manufacturer's brands and it's a testimony to our drive to afford our customers nothing but the best quality.



Under the motto of "The Smart Alternative", the filtration specialist summarises all advantages to independent specialist companies that are associated with service parts in OE quality. "Our campaign is aimed at our direct customers from the independent aftermarket like wholesales and exporters. But of course at their customers such as independent workshops. Partners at all levels do not want to be troubled by unreliable partners or customer complaints about inferior products," Nabrotzky elaborates.

The campaign is being rolled out by Hengst in the worldwide aftermarket and has already become "visible" at various trade fairs. For example the AAPEX trade fair in Las Vegas or the Automechanica in Shanghai. Nabrotzky says that they have already received very positive feedback from the market and are delighted that this new campaign has been well received.

This new approach necessitates that partners are also looked in. This is going to be achieved through training sessions to bring distribution partners up to speed on this campaign. "The campaign takes place on all channels, including direct communication with our customers. At the heart of our campaign are the people who live the Hengst Filter brand story and whose actions have provided the basis for the campaign in the first place. We also underline this with real people for each letter, who authentically fill the statements with life.

As a new campaign, it is extremely different from those that Hengst ran in the past and from what we are seeing today. It is more playful which undoubtedly is what they are aiming



for. It reminds of modern comics. Obviously, the creators of this campaign are not afraid that Hengst as one of the main global OE players will lose its image of a serious OE Filtration developer in the independent aftermarket. Nabrotzky underlines this by saying that, "We created a clear and unmistakable layout that sets us apart from the competitor environment. The campaign uses our strong brand image, which we have built up not least through our OE expertise. We are convinced that our customers can differentiate between a strong appearance and the basis of this - a reliable partner both for the world's leading manufacturer brands as an OE partner and as a trustworthy companion in the independent aftermarket. The image of communication is one thing, but the messages that are lived every day are another. We are convinced of both."

However, as this campaign sets out to put Hengst onto a new direction, there are several issues that need to be addressed to make this future-proof. Filtration systems from Hengst can be found in all engines from worldwide manufacturers in the passenger car, commercial vehicle, agricultural and construction machinery sectors. In the field of fluid management modules for commercial vehicles, Nabrotzky is proud to report that they are even the world leader.

"Fortunately, our order books in the OE sector are full and in 2019 alone we have invested 60 million Euro in new plants and machinery to prepare the planned series start-ups of the major manufacturers."

Nabrotzky has more good news to report as he is saying "In the truck sector we had, in 2019, a SOP for MAN Truck & Bus with a fuel service center module. The module is a five-stage filtration system with lifetime water separation, in which the single stages are optimally integrated in a pre-filter and main




filter. For Sinotruk, a fuel filter for natural gas engines also went into series production this year. As well as an oil filter, a cylinder head cover and our Blue.maxx fuel filter system for the new TCD 5.0, 4-cylinder engines from Deutz and a fluid management module on the MDEG engine base for DDC. Series start-ups of various filtration systems for Daimler Trucks, Weichai, Scania and DAF are planned for the next few years."

As everyone is talking about electrification of commercial vehicles, this is also a topic that concerns the management at Hengst. Without a combustion engine, there would not be a need for engine oils for instance, thus the oil filter as we have known it for decades will no longer be required. According to Nabrotzky, developments in the global markets are becoming increasingly unpredictable. Technological upheavals caused by the electrification of drives or digitization are also affecting their business. "All these developments present us with challenges that we are already tackling together with our customers." The focus here is on opening up completely new business areas with the topics of transmission oil filtration, smart filtration or solutions in the field of electromobility, e.g. for oil-cooled axle elements, as well as the expansion of the industrial filtration division.

"Despite uncertain conditions in some areas, we continue to operate in a future market with enormous growth potential." Current forecasts assume that the global filtration market will double in the next ten years. Filtration remains simply exciting and offers so many opportunities to remain a specialist in this field in the future.

There are several driving forces that are pushing innovation in Hengst. Firstly, the company aims to optimise product costs for customers. This is not done by driving the price of raw materials down, but by engineering clever filtration solutions. One example would be the way air / liquid flows are designed. If there is better flow in filtration modules, better fuel efficiency can be achieved. Another way is to design filters in ways that allow for the replacement of parts that have reached their lifespan (filter insert) but keeping those components that are not subject to wear and tear (filter cartridge). Such approach will not only reduce the cost to replace the filter, but also vastly reduce the wastage of valuable materials. Therefore, Hengst is of the opinion that the spin-on filter concept is no longer contemporary. What might be a most surprising fact is that Hengst has an enormous capability in terms of production depth.

This expertise and knowledge is ingrained in the production of the filters. Standing amidst the filter production in the HQ is a machine that produces plastic end caps. When asked why this is done in-house, the answer from the production manager is surprisingly simple: nobody produces as many of these caps as we do and therefore our quality and know how is better than that of any outside supplier. Besides volumes of knowledge about filtration, Hengst also has production capabilities to produce injection mould aluminium components. The foundry produces modules between 250 gram and 11 kilogrammes. In order to do so, Hengst needs to be knowledgeable about the entire process from melting to injecting the aluminium, from designing to testing. All components are being tested using very specific test protocols. It was learned that even the ambient temperature needs to be controlled for tests in order to not distort the results.

Similar, Hengst also produces plastic parts needed for their filter manufacture. Again, this requires in-depth knowledge of the raw materials and their characteristics. To streamline the production, Hengst typically designs and constructs own production robots and machines in order to meet the specific needs of their product design. Given the enormous knowledge about raw materials, production methods and in-house capabilities, it is no wonder that the company is so highly innovative as everything needed is at hand. Their effort is being recognised as aluminium parts from Hengst are winning awards from bodies focused on the die-casting industry, which is not where Hengst sees itself in! 



MAN is Driving into the Future at Busworld Europe

Songyot Kamontavikun went to Brussels to find out what the latest trends in the bus market are.

The biggest Bus and Coach only exhibition in the world organised its first edition in Brussels from 18 to 23 October 2019. The exhibitors, visitors, members of the press and the organising teams all agree: it's been a great success. Busworld was bigger and better than ever.

Summed Up

All numbers increased: more space (50,000 to 79,000 sqm), more exhibitors (376 to 511 of which 176 were newcomers), and more visitors (37,274 to 39,798). The overall feedback was very positive, 2019 most definitely will be a milestone in Busworld's history.

International audience 511 exhibitors came out of 37 countries with the top 3 being Turkey, Germany and China. Visitors came from 143 countries which is a significant difference in comparison with 118 countries in 2017. Busworld clearly confirmed and even reinforced its bi-annual international sales and networking platform for all professionals in the bus and coach industry around the world.

At the show, Songyot Kamontavikun of Asian Trucker Thailand spoke with key personnel of MAN about the products on display, their future direction and market developments. First he spoke with Jan Aichinger, Head of Product Marketing Bus.

Look into the Future

Aichinger explained that the slogan for MAN at this year's Busworld is "Driving the Future". MAN's display was about showcasing the product the brand is planning to introduce to the market under this motto. "Some of the products you see here will actually enter series production next year. There is for example the electric bus and our articulated bus." For coaches, MAN was showcasing mirror-replacements. In addition, the E-TGE was again a centrepiece.

"It has been a very proud moment last night as we have also been awarded with the "Coach of the Year Award" for our Lions Coach," he said. This is, according to him, the most important award globally, which is a particularly tough competition. It was the overall concept, including the lifecycle cost of the product that won the award, not just a single feature. Aichinger explained that this is the result of the development process being driven by the market demand. "We are working with boundaries we see, such as legal requirements that we



foresee. In addition, we have a panel of customers that we are working with to give us direct input.”

Putting Passengers First

Taking into consideration the feedback of this panel, it is the customer that is driving the development. Any vehicle would need to be tested for a minimum of 12 months, in real life, by a customer. In addition to tests on the proving ground, this will enable MAN to produce reliable vehicles that are also offering the best Total Cost of Ownership (TOC). This may sound simple, however, Aichinger points out that beyond the legal issues, there are many other considerations. For instance, accessibility for disabled or elderly users, accessibility for components, which is important for the workshops, comfort in a coach and many more thoughts need to be put into the development of a new vehicle. “The main focus is to address the needs of a customer, the passenger. One cannot just simply put a box on top of a chassis.”

Furthermore, direct feedback from markets outside of Germany will be taken into consideration. This is particularly true for the south east Asian market. Feedback from the markets will be given to the headquarters and taken into consideration for future developments. “At the moment, the sales volume in Europe is much bigger than in these markets, naturally. However, we ensure that the needs of all markets are looked after,” said Stefan Sahlmann, Head of MAN Transport Solutions.

Local Support

In close cooperation with the market, for instance in Singapore, the brand is working very closely with key stakeholders. Here MAN has selected a specific chassis for this market, appointed a body builder that is capable of producing buses according to the high standards of MAN and tested the fully built-up vehicle in Germany and eventually bringing the vehicle back to the market. In the meantime, there have been various evolutions of the bus and “The result speaks for itself as we have by now sold more than 1 000 buses in Singapore.”

Sahlmann explained that MAN’s philosophy is to not just sell a chassis, but to work with the body builder to ensure that the quality is in line with the chassis quality, something that he admits is very difficult. “It is a very close cooperation that one needs to get involved in.” In this connection



and flexibility. Especially in the case of electro mobility, there are challenges that need to be addressed. For instance, the charging times of electric buses should not be longer than filling a tank with Diesel.

As a trend in Europe, operators are aiming to move to zero emission operations by using electric buses. Assisting customers to make the right choices, MAN is offering consultancy whereby an in-depth analysis will be carried out and the operator can rely on MAN to provide the right choice of solution. In the case of electric buses, energy supply is crucial, not only the amount, but also the locations of energy supplies are important considerations. "This way, any customer would get a customised solution, a concept tailored to the customer, not just a one-size-fits-all blueprint."

Simplifying It

A new approach by MAN is to "Simplify Business", as communicated in recent months. The underlying idea is to bring the right offering and approach to the customer. This extends beyond the hardware, but extends to the way business is conducted: being approachable, being personal and forward thinking. "It is the interaction with the customers, and this is adjusted to each market. What may be simple in Germany may pose problems in other markets," weighs in Thilo Halter, Head of Sales Area Asia Pacific. Halter acknowledged that certain markets require a high level of customisation of the products.

In today's world, just supplying the hardware is no longer good enough. Hence, MAN is taking the approach of offering transport solutions. These need to be tailored to the needs of each market. While one may think that the wide range of product variants may be an issue, it is actually the software that needs to be much more sophisticated.

Where Next?

What the markets can expect is that MAN continues to strive to supply reliable vehicles with high ROI. Aichinger elaborated that MAN has a growth strategy, and it needs to be supported by products that go hand in hand with this. "We constantly analyse the market and introduce products and solutions that are right for the market. In addition, we are enhancing our relationships with local partners." As the end user needs both, chassis and body, MAN is emphasising the need for competent body builders. This is reflected in fact that there is a special event that takes place at Busworld. Every time MAN attends the fair, body builders from all over the world join MAN on Monday evening to exchange experiences and to foster relationships. ■



he mentioned that local productions in many countries, such as Thailand, are the only way forward. Importing CBU vehicles may not be feasible since the players in the market cannot afford this and would depend on local production in order to reduce the investment into new vehicles.

Smarten Up

In tandem with smart cities, buses now also need to smarten up. In the view of MAN, this means that the vehicles need to ensure high efficiency for the operator in combination with high reliability

Real-time Driver Fatigue and Distraction Prevention Technology



Guardian is proven to reduce fatigue events by more than 90 percent



Driving while fatigued and distracted is a major road safety issue in Malaysia, particularly among truck and bus drivers. Shift design, individual driver behaviour and workload design are all contributing factors in potential fatigue and distraction related accidents.

Currently there is an average of 209 fatalities per year which involve a lorry. This number of road accidents has shown no significant reduction over the past 10 years and with an increasing number of fleets in the country, more technology solutions are needed to address this issue.

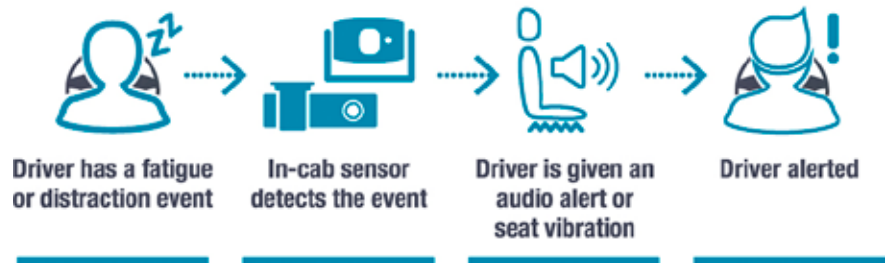
According to the Malaysian Institute of Road Safety Research (MIROS), 81 percent of road accidents were caused by human negligence. This figure includes fatigue and distraction which impair a driver's ability to react to potential road hazards.

Besides the tragic nature of injuries and loss of lives, road accidents result in significant cost burdens to the community, and especially governments. Depending on the severity, road accidents may result in costs ranging from RM 13 000 for a minor incident, and somewhere in the range of up to RM 1 300 000 where serious injury or death occurs. Road accident cost covers key components, namely medical costs, lost output, wage risk, damage to property and court awards. Lost output, wage risk and others reflect the



drowsiness or distraction in real-time and helps to prevent accidents before they happen. Used by transport and logistics companies worldwide, Guardian has been proven to reduce fatigue events by more than 90 percent. In the past 12 months Guardian has intervened in more than 117 000 fatigue events and since its launch in 2015 has detected more than 5 000 000 distraction events.

HOW IT WORKS



Guardian uses reliable face and gaze-tracking algorithms that measure the driver's head position and eye closure and, when safety parameters are exceeded, audio alarms and seat vibration are immediately activated. Guardian also features a forward-facing camera which captures critical information about road conditions at the time of the event.

When a fatigue or distraction event is detected, data and footage are relayed to Seeing Machines' 24/7 Guardian Centre, where analysts review each event that is detected and are then able to alert fleet management and allow them to respond in real time to any developing situation in their vehicle. Importantly for drivers, Guardian respects privacy and only sends in-cabin video to the 24/7 Guardian Centre for review if an event occurs. It does not act as a CCTV, meaning that managers cannot access it remotely under any circumstances.

Guardian's in-cabin alerts are supported by the Guardian Live database. Managers are provided access to Guardian Live and can gain further understanding of driver behaviour. Weekly reports help fleet managers to analyse fatigue and distraction events with respect to time of day, the location and speed at the time an event occurred. Guardian empowers fleet managers with data to drive change in their organisation and can be used to positively influence driver behaviour as well as company safety policy. **■**

potential loss to the employer and the economy due to productive time lost because of an accident.

In a road traffic accident, damage to property not only includes the damage to the vehicles involved in the accident, but also to roadside infrastructure like lamp posts, railings and trees. Further, there is the threat of litigation which may result in court awards to cover road crash victims for non-economic losses as a measure of the quality of life.

Australian company Seeing Machines has developed a sensor-based technology which aims to reduce the risks of drowsy and distracted driving, known as Guardian. Guardian delivers a reliable and unobtrusive solution that detects driver





TMS Bus Launching and Handover Ceremony

Launch of new chassis marks new milestone for the company with MOUs signed to import high-tech to Malaysia to advance electric buses.

Terus Maju Services Sdn Bhd (TMS) is striving to build a world-class eco-friendly bus industry conglomerate that promotes the protection of the environment with the use of environmentally friendly transportation in Malaysia. This entails the establishment of Malaysian electronic buses (E-Bus, also known as Green Smart Bus), thus achieving a technical milestone in collaboration with the Chinese capital to seize the great opportunity for the ASEAN market business of more than 600 million people.

Ready for the Region

"We are optimistic about the growing potential of the ASEAN market's demand in the next three years. In fact, the ASEAN Economic Community, which was established in 2015, has garnered the attention of the international community. Being one of its members and one of the major funding countries, Malaysia should naturally be integrated into this community. This would bring to bear the key principle of "Cooperation is power," said TMS Managing Director Loo Kok Seong at the ceremony.

Loo further pointed out that TMS has identified this fast-emerging industry and has already started rapid operations. "We have specially installed a left-hand drive chassis with the intention of exporting the product to countries with a huge and emerging market of young people such as Myanmar, Vietnam and Cambodia. We assure that everything is well-prepared and ready, in hopes that together with the ASEAN countries, we would be able to build new platforms and innovations, as well as share new achievements," he said.

State-of-the-Art Chassis

In order to optimise customer experience and satisfaction, TMS proudly presents its brand-new product — TMS Chassis, in the TMSBUS Launching and Handover Ceremony held on 11 November 2019. The new product and concept being introduced aim to achieve excellence, in providing users not only with a secure but also a remarkable driving experience with the use of outstanding engine horsepower. According to Loo, this serves as the

establishment of a new chapter in the history of Malaysia's transportation system. The TMS Chassis represents the quest for excellence in all the new areas of technology put forth in its production. This product will be built with an advanced retarder system and brakes, an Antilock Brake System (ABS), a complete air suspension system and various durable industrial technologies that are well in line with globally recognised production qualities and standards.

The TMS Chassis will come in four available models that are fully integrated with the latest international technology. The models being introduced are TMS09, TMS12, TMS12A and TMS12L, each model addressing different needs of the users. These variants are:

- TMS09- Midi bus chassis
- TMS12- Standard coach bus with manual gearbox
- TMS12A- Standard coach bus with automatic gearbox and bigger engine than TMS12
- TMS12L- Standard coach chassis made for left hand drive to export to ASEAN countries.

Addressing Future Needs

In view of the National Transport Policy (NTP) with effect from 2019 to 2030, TMS is committed to heading towards the creation of environmental-friendly transportation. TMS and Chinese-owned Zhongtong Bus Holding Com. Ltd. (Zhongtong Bus) have joined forces to bring new electronic bus technology to Malaysia.



forces to bring in electronic buses and look forward to bringing high-technology electronic bus products and parts to Malaysia in 2020. Second, TMS is collaborating with a company from Myanmar, LA Coach Master, to introduce to the country up to 50 left-hand driven buses.

Receiving Buses

Eight customers received their buses during the event: Lotus Vacation Sdn Bhd, KKKL Group, Jasa Sinaran Ekspres Sdn Bhd, Utamagas Sdn Bhd, LA Holidays Travel & Tours Sdn Bhd, Kenzai Transport, LA Coach Master (Myanmar) Co Ltd and Alwani Zafirah Services & Holiday Sdn Bhd.



In this ceremony, with YB Loke Siew Fook as witness, the handover of the first eight TMS12 models of the TMS Chassis product line to Malaysia and Myanmar will be carried out. Asked about autonomous vehicles, Loke said that "Everybody is talking about it. However, we are not ready yet. There is a lot more that needs to be done in terms of legislation and preparation for autonomous driving." He went on to say that, in his view, more needs to be done to raise awareness for safety when driving first. For example, accident-prone areas need to be defused, motorists need to embrace the use of child seats and issues pertaining road design need to be addressed. "We also need to improve licencing, whereby we are looking into computerised tests to ensure consistency."

During his address he spoke about the benefits and needs of safe vehicles, especially in view of the upcoming "Visit Malaysia 2020" year. He opined that safer roads and vehicles would bring with them an increased number of tourists. "My vision is to see that every operator shows a safety video before starting a journey, just like what is done in air travel." ■

This collaboration between TMS and Zhongtong Bus also marks the beginning of a new era of electronic bus technology that promises environmental protection and international recognition for the transportation technology industry in Malaysia.

Loo stated that TMS hopes to be making a contribution in the development of the new energy automobile industry and to promote the new industrial development trend of green transportation in this country. "The E-Bus program is a small step for TMS, but a big step for the future of national green bus and transportation. We expect this highly meaningful project to be implemented and ready to serve the people in 2020," he added.

Strong Partner

Also speaking at the event was Mr Li Jiliu, the General Manager of Zhongtong Bus in charge of new energy overseas promotion. He said that the company will be presenting one to two new energy vehicle developments in Malaysia very soon. "In the future, in collaboration with TMS, we will be promoting the launching and development of new energy vehicles in Malaysia, thus advancing Malaysia's environmental protection and transportation industries with the contribution of China's programs and forces," Jiliu elaborated. TMS has a solid business partnership with Zhongtong Bus, and the TMS Chassis is the masterpiece of the technical collaboration between the two. The TMS Chassis uses advanced technology and currently offers both left- and right-hand driving options.

Zhongtong Bus was established in 1958. Since 1972, it has been specialising in producing automobiles, and in 2000 it successfully entered the Shenzhen market. It is one of the first bus manufacturers and leading companies in the industry. Zhongtong Bus is well at the forefront of the industry with total assets worth 150 billion Yuan. The Chinese-funded enterprise has a world-leading modern production line with an annual production capacity of 30 000 energy-saving and new-energy powered vehicles. It was also the first in the industry to obtain the required fuel cell version, pure electric and plug-in hybrid in the latest commercially produced vehicles.

During the grand launching and handover ceremony, two Memorandums of Understanding were signed, as witnessed by the guests of honour, YB Loke Siew Fook, the Minister of Transport Malaysia and Madam Shi Ziming, the Economic and Commercial Counsellor of the Embassy of the People's Republic of China in Malaysia. This puts in place a new cornerstone for future prospective cross-border collaborations. The two international collaborations that have gained local and international interest are: first, TMS and Zhongtong Bus are joining



Volvo Buses see Interesting Opportunities in Prospering Cities Around South East Asia

In an exclusive interview with Asian Buses, Mats Nilsson, who returned to South East Asia after a stint with Renault Trucks in France, talks about various market requests and the need to address demands with the right products.

Mats Nilsson, Director of Volvo Buses Region Singapore, is no stranger to the region as he was based in Malaysia for more than five years, heading Volvo Trucks Malaysia as Managing Director. He is also no stranger to buses because prior to his 18 years of working in the truck market, he was Area Sales Manager for Volvo Buses for six years in the mid-1990s. "After a number of successful years in Malaysia, it was time to take on a new challenge. In addition, as market director in a company like Volvo, you can only stay for a certain period of time. It is important to secure a certain level of renewal and rotation and also to give opportunities for other people with the right potential to move to similar positions."



After leaving Malaysia, Mats was responsible for all the new truck sales in Europe for Renault Trucks. "It was a headquarter role in which you steer the direction and build up strategy. I really enjoyed the journey of leading the way, but I also missed the buzz of being at the front lines, meeting customers, and stakeholders, and being able to see and impact more directly on what is happening on the ground," he said. When the opportunity came up to move back to Southeast Asia, he knew it was just the right time. His career in Volvo started with Buses in 1995, hence the transition was as smooth as returning to the old family. "At the time, I was handling the Middle East markets." He sums up his experience within the Volvo Group as one that is highly diverse, with different products, taking different functions and in different countries.

"I knew that this would be an interesting chapter. I enjoyed working with buses before and I am looking forward to the new challenges in this role now." In his view, traffic congestions and quality of life go hand in hand and the idea of promoting clean and safe buses as well as implementing solutions such as the Bus Rapid Transit systems is close



to his heart. He actually thinks that the time for buses has never been more right than today. He echoes the famous quote: A developed society is not where more of the poor drive cars, but where more of the affluent go by public transport. "I thought about this many times. What is the progress? Look at China – where the majority used bicycles some years ago, then they got wealthier and many started buying cars. However, today, in developed markets people are trying to get onto buses – or even back to bicycles – as much as they can."

Within the region that is under his purvey, there are countries at different levels of maturity, size and with different types of challenges. Singapore, obviously, is highly developed, whereas other countries are more of a greenfield in terms of bus-usage. "Take Indonesia for instance where the population grows by about five million every year and all the people need transportation." The Trans-Java highway for example, Mats said that these new mega-roads are also playing into the hands of the brand. European buses, as compared to the Asian makes, have bigger engines, are safer, more comfortable and higher in specifications. This would, according to him, be beneficial



on long distance travel where the vehicle operates for extended hours and longer time at higher speed. Mats is pleased to know that this has created high demand for the products and solutions that Volvo offers.

Volvo, being a global manufacturer, is proud to provide products and solutions that meet the needs of every country in the world. However, Mats also mentioned that the company will not simply create new models to fit into every single market segment. "In principle, we believe very much in the efficiency and effectiveness of Mass Transit solution. Accordingly, we think that the 12 to 18 meters buses, including the articulated ones, are what we are good at and are what we will stick to." The philosophy mirrors that found in the truck segment: longer vehicles result in fewer ones on the roads, less congestion and cleaner air. Looking at the ASEAN Economic Community, Mats sees great potential. Joining forces, in his view, will enable the trade block to respond better to the current global economic climate. In addition, a unification of the markets would allow for greater economies of scale.

Autonomous vehicles are on everyone's mind and Mats addressed this topic. Citing the telecom industry, where some producers, such as Nokia, maintained that mobile phones would have to remain looking and working in a certain way, was caught by surprise when the market switched to new technologies i.e. smart phones. "When it comes to autonomous vehicles, we may not see such radical development happening on public roads; however, in confined areas we already see the involvement of some applications." While NTU in Singapore is operating Volvo Electric autonomous buses, there is still a long way to go before these vehicles become commonplace.

Transportation is also based on city development and government policy. When decision for a BRT is made, dedicated lanes are ideally possible to create, thus reducing space for individual vehicles. Should the city then opt for full electric buses, the cost per vehicle may be higher and as a result, less buses may be put onto the BRT. If there are not enough buses, the BRT system will fail. The question is then what makes most sense, which technology is most suitable and which trade-offs have to be made. In this context, he said that electrification of transport is set to grow, but there needs to be more development in terms of energy efficiency and consideration for the full well-to-wheel environmental impact. "Today, it is my firm belief that clean diesel, Euro6 hybrids are a very good compromise because the hybrids guarantee an ample range, consume less fuel, generate less emission and create less noise and are independent from a charging infrastructure."

"With an economic growth of around five percent in the region, it is great to be back in Asia. Seeing how we are excited about half a percent GDP growth in Europe, I think we have a lot to do and many opportunities to seize here," Mats concluded. ■

Daimler India Puts the Incredible into the Bus

Chennai has long been a trading post for goods sent out to other parts of Asia. Even the East India Company felt that they needed to be close to the Straits of Malacca for their spice trade and Fort St George is the first English (later British) fortress in India, founded in 1644 at the coastal city of Madras, the modern city of Chennai. Now home to what could be described as a mega factory for Daimler, it has grown to a bustling city where "Brain is cheap", making it a preferred location for industrial companies.

Incredible Project

Daimler Trucks is a major contributor of revenue to the Daimler AG (the listed holding). With over 80 000 employees, it generates some 38 Billion Euro in revenue. When the brand looked for a strategic location to serve Asia and the rest of the world, it found a new home in India.

Daimler India Commercial Vehicles (DICV) was established in 2009 and the operations is headquartered in Oragadam near Chennai and sits on 162 ha (~400 acres) of land. What started as a greenfield project has now evolved into a major export hub with more than 4 000 employees. It is noteworthy that the first installation completed was the test track, which was opened in 2010. Addressing concerns about the branding, Daimler decided to label the vehicles made for the local markets "Bharat-Benz" whereby the brand was unveiled in 2011, one year ahead of the plant inauguration and introduction to the market.

Locally Sourced for Export

As with any other local production, the key to reducing cost and building in flexibility is to be able to source components and parts locally. Since the region is already home to many industrial companies, this was something that DICV enforced. Today, the locally sourced content makes up more than 90 percent. The supply chain is comprised of over 350 domestic partners, of which 50 percent are located in Tamil Nadu, the region in which DICV is located. Suppliers are



Asian Buses visited Daimler India Commercial Vehicles to explore their ultra-modern and innovative production facility.

either homegrown local companies that can manufacture to the high standard of DICV, or subsidiaries of international brands that have also set up their production here in order to serve the local market.

Built with future growth in mind, the world-class manufacturing plant has a capacity of up to 72 000 truck units and 1 500 bus units per year. From here, DICV is serving 50 truck markets and 18 bus markets across the globe. Locally, a network: more than 200 dealer-run sales and service touchpoints across India serves customers that have bought Bharat-Benz.



Green production efforts include utilization of renewable energies (photovoltaic field on site, procurement of green power), water conservation and management ("zero discharge"), waste management, tree plantations (more than 16 000).


Synergies

During the company presentation it was learned that DICV has a high level of autonomy. Local management has almost 100 percent autonomy. However, Pradeep Kumar Thimmaiyan Vice President Product Engineering – Entire Vehicle India, said that it would be unwise not to use the synergies that are possible being part of the Daimler network. Access to other development centres and the global reach of the brand allow for the development of products that suit every market.

He said that the development of some vehicles was done by taking the best of both worlds, the Mercedes and FUSO platforms and combining them to a bus that is derived from market demand. "We are able to offer products that cover the ranges of Euro 3 to Euro 6 buses and we can also work on products that are to be sold outside India only," he told Asian Buses.

Global Daimler Quality

Recently, DICV has been awarded "CV Manufacturer of the Year" in the CV Magazine Awards, which is sponsored by Apollo tires. However, the accolades of the firm extend much further. The "Quality triple" of major certifications was achieved within four years after the start of production: Quality Management System (2013), Environmental Management System (2015), Occupational Health and Safety Management System (2016). The plant is certified according to global standards IATF 16949, ISO 14001, ISO 45001. In doing so, Indian products assure the quality of Daimler's DNA.

The state-of-the-art Quality Lab and test track on site to ensure stringent standards. The QM Central Lab has been granted accreditation by NABL as per ISO / IEC 17025 : 2005. The ISO norm is an international standard for testing and calibration laboratories. This makes DICV the first within Daimler Trucks to get such accreditation. 

Full Range

It is noteworthy that the plant produces trucks for four brands and is exporting products to 50 markets under FUSO, Bharat-Benz, MercedesBenz and Freightliner brands. DICV offers the full 9t-55t range of BharatBenz trucks, which was launched in India in 2012; more than 90 000 BharatBenz vehicles handed over to customers. The domestic product portfolio expanded with BharatBenz buses and a Mercedes-Benz coach in 2015. Since then more than 2 800 buses were handed over to customers.

One of the products manufactured is a gearbox that is made for Mercedes Benz. The DICV management team is proud of this as it shows that, clearly, the quality levels of the plant matches that of the brand, just as in any other Daimler plant in the world. Speaking to the heads of DICV, Asian

Buses learned that the management sees potential to increase the services that can be provided from here. Research and development as well as sourcing for components and design services are some of the areas that can be boosted to benefit all brands globally. Economies of scale can be achieved while leveraging on the cost savings through producing in India.

Green Production

Starting from scratch, DICV could also ensure that green concepts were incorporated. When approaching Chennai by plane from the right direction, one can even see the huge Daimler logo which sits in a field of solar panels. The environmental management system is certified according to ISO 14001:2004 and major awards in 2017 for Environmental Management (Golden Peacock Awards) and Energy Management (CII Energy Circle) have been won.



Life's Little Joys

Asian Buses met with Abdul Rahman, a Hop-On Hop-off bus captain from Penang to discover his life stories.

Abdul Rahman bin Hamid is a 57 year old driver from Penang. He is one of the drivers of the Penang Hop-On Hop-Off. Abdul Rahman has been with Elang Wah for three years. Having driven buses for 25 years, he has driven for a variety of companies such as Sri Jaya, Inderakota and RapidKL.

After obtaining his licence, he started his career as a bus driver in Kuala Lumpur as there were more job opportunities in the Malaysian capital. As an express bus driver, Abdul Rahman is thankful for all the opportunities he was given to travel around Malaysia. "I love to travel, which is why I applied for a job at an express bus company. Sometimes I would drive to Terengganu and sometimes I would go to Johor. Even though I am unable to stay in a certain place long enough to explore the city, I am allowed a few hours upon arrival at a destination to try out good restaurants in that area. Sometimes I discover local eats whilst sometimes I take a nap to recharge for the journey back. I think I have driven to all the states in Peninsular Malaysia. If not for my job, I would not have been able to do that," shared Abdul Rahman whilst we stop over at Gurney Drive to allow the passengers to alight.

After spending some 20 odd years as an express bus driver in Kuala Lumpur, Abdul Rahman said he got bored of the busy city life in Kuala Lumpur and moved back to Penang. "Penang has grown tremendously since I left the state

20 years ago. Now, Penang is able to provide similar job opportunities as Kuala Lumpur without all the hustle and bustle. I can be closer to my parents too, which led me to decide to move back here."

Abdul Rahman recalls of an incident on board the bus that left a deep impression on him. "During one of my long journey trips to Kedah, there was a toddler on board that never stopped crying. He was travelling with his mom and she was obviously very anxious as he was disturbing everyone on board. She tried very hard to pacify him but he would not stop. Once I got the opportunity to pull over at the rest station, I went and got him an ice-cream. He stopped crying after that. I don't think ice-



cream is a good idea for a toddler but at least he stopped crying" he said sheepishly. Abdul Rahman added that as a father of two children, eight and 13 respectively, he resonated with the mother.

"Ever since I moved back to Penang and started the job as a Hop-On Hop-Off bus driver, I have had more opportunities to return home and be with my children. As an express bus driver, I was rarely home and missed most of my children's milestones. With my current job, I get to go home after 6pm and have dinner with my family," he added.

Abdul Rahman's day starts as early as 6am when he leaves his house in Seberang Prai. Then he sends his kids to school and crosses over to Penang Island on the ferry. There he will get to the depot and reports to work. He checks the bus he is going to drive for the day and heads off to meet his first passenger of the day. "Due to the nature of my job, I meet different people from various countries every day. I have even brushed up on my English language because of this! As people who board the bus are mostly foreign tourists, I have picked up some easy words in foreign languages. It is fun to meet different people every day and I am more than happy to show them what my home land has to offer."

About his future, Abdul Rahman said that he foresees that he will be staying with the company until he retires unless some unforeseeable circumstances arise. "I am happy with the way my life is right now. Sure, I may not be earning as much as I did when I was an express bus driver but I am able to provide for my family and we live a comfortable though not luxurious life. I am able to go home and get enough sleep everyday which is important when you are my age. I get to enjoy time off with my parents, wife and kids. I am grateful for these and as I get older, I learn to appreciate these little things more," the kind driver added as he dropped me off at the Chowrasta Market station. As I alighted the bus, I spotted a group of Japanese board the bus whilst Abdul Rahman greets them "Konnichiwa". It is not often one sees such a passionate bus captain and it was definitely a pleasure to meet and speak to Abdul Rahman. 🇲🇾

Fully Converted from Diesel within a Week

// From the ecological and economic aspects, there is no alternative to retrofitting existing bus fleets," says Andreas Pfeffer, Managing Director of "I see electric busses". His consortium of six companies, with years of experience in the electrification of commercial vehicles, converts a diesel bus into an all-electric bus within one working week. In October, a converted MAN bus took passengers on a test drive around Busworld in Brussels.

"For bus operators, replacing the upholstery in public service buses is almost an everyday task," says Pfeffer, explaining how the interiors of used public service buses are maintained in such good condition. It goes without saying that the external advertising is also up-to-date. However, after 10 years the engine and transmission have had their day. Pfeffer, who studied internal combustion engines as part of his degree course, gives these old buses a new lease of life. "It's now almost impossible to sell old buses to Eastern Europe because the cities there are also opting for clean vehicles," he explains. "Virtually the only option is to sell them at a significant discount."

The experts at "I see electric busses" spent 12 weeks dismantling and analyzing a MAN bus and then drove it back out of the workshop as an all-electric bus. "Once the engine and powertrain are removed, the interplay between the electronics in the vehicle has to be reorganized," says Pfeffer. "I see" has already converted electric transport vehicles in the 3.0t and 3.5t (4.25t) range and is now entering the retrofit business for public service buses. "To date, we have returned around 400 electrified vehicles to the road," says Pfeffer, adding firmly that "we know exactly what we're doing."

So, for him, the idea of any gears for electric motors on the wheel hub is also simply out of the question. "There are problems with gears at high speed." That's why he relies on the ZAWheel from Ziehl-Abegg, an in-wheel hub drive that doesn't require any gearing because the ZAWheel is a genuine in wheel hub motor that fits completely inside the hub.



Technology leader "I see electric busses" converts city buses into all-electric vehicles.

The state of Schleswig-Holstein provided financial support for the retrofitting of the first MAN public service bus. The partner for the implementation of this programme within the fleet is Autokraft/DB Regio. "There is the potential for retrofitting several thousand vehicles," says Pfeffer happily. After the ride in the first converted MAN bus, the Schleswig-Holstein Minister for Energy Transition, Jan Philipp Albrecht, said: "The future of mobility is integrated, increasingly emission-free and flexible."

It is basically impossible to achieve the inner-city emission targets with the electric buses currently available from Mercedes and MAN. "That's why we have to get started with the existing fleet," says Pfeffer. A 12-week development period for a prototype was ambitious but, with an experienced rehearsed team, certainly feasible. Only components from market-leading suppliers were used: Webasto, Ziehl-Abegg and Moteg, with Webasto supplying the battery. This was developed for large-scale production in commercial vehicles, the characteristic features being a crash-proof housing and outstanding thermal management; according to Webasto, the battery control unit ensures that every single cell continues to perform at the same level even after 10 years.

Thanks to the absence of drive train and gearbox, the genuine in-wheel hub drive from Ziehl-Abegg is ultra-low maintenance and highly efficient. This means that the size of the battery pack can be reduced compared with that on a central drive. "The entire drive unit, including the power electronics, is installed in the wheels of the rear axle, without a single gear," says Pfeffer, explaining the in-wheel hub drive. This reduces the energy requirement to markedly below 1 kWh per kilometre travelled.

The auxiliary units, specially developed for battery-powered electric vehicles, are supplied by Moteg. Compared to other units available on the market powered by asynchronous motors, they are up to 3-times smaller, 6-times lighter and significantly more energy efficient. ■

Key data on the converted public service bus

Year of construction	: 2011
Manufacturer/model	: MAN A20
Owner	: Autokraft / DB Regio
Length	: 12 metres
Seats	: 49
Battery	: 210kWh
Motor output	: Advanced axle nominal output 240kW
Conversion company	: "I see Electric Busses GmbH"
Development period	: 12 weeks



Could I Take the Pressure?

Ask anyone if they have issues at work and if they feel overwhelmed sometimes and I am certain they will all say "Yes". I believe that people in certain professions are subject to more pressure and stress than others. Maybe you are thinking of commercial pilots. They have tremendous responsibilities! However, I believe one job I am not made out for is that of being a bus captain; I better stick to bus captions.

Sneakers aren't Trainers

Why do I say a bus captain may be subject to pressures I couldn't handle? Well, let's start with the education and the constant need to upgrade oneself. I left school some 15 years ago and have since only acquired knowledge on Facebook. I am not a trained journalist. This is something that fell onto my desk and while winging it at first, I got the hang of it and eventually I managed to get good enough a writer and to win an award. Now, would you trust me with an articulated bus and your family inside? Maybe not. You would insist I go for proper training first with a licence that I would have to sit for and pass. For as long as I have been writing for Asian Buses, there have been calls for more and more high-level courses to be taken by bus captains to ensure they are up to speed. Or should I say that they stay within the speed limits? Some operators even have training academies!

Being Away

Long distance drivers also have to deal with the fact that they may not see their family for several days. Driving here and there may mean the vehicle is a rolling living room with sleeping quarters. Some vehicle makers have added a cosy cabin to the bus so relief drivers can rest. However nice that may be, it still doesn't replace the homely abode one's apartment is. Being away from home and hearth also means depending on food available along the road. Which may not only be unhealthy but also limited in choices. Recently, I was lucky that I had a whole row of seats to myself on a plane. I still could not make that work for me as a place where I could really rest.

Higher Authority

Next up: the boss. If an office worker comes in a little late, then the boss may not even say anything. "Traffic bad la!" usually settles that. If your bus captain comes in late, then there is a whole chain of issues that ensue. Late departure of the bus results in upset passengers or if the bus needs to be replaced with another driver that colleague may not be too happy. Add to that the need to drive as fuel efficient as possible. As soon as fuel consumption goes up, there will be a chat to be had. Same goes for the tyres. If they wear out too quickly, then one would have to answer for that.

Highest Authority

When driving a bus, the most precious things on board are, naturally, the passengers. What I have learned in these years is that managing machine and passengers at the same time requires skills. You can't just floor it at the traffic light as passengers may tumble like bowling pins. The bus also needs to be kept clean. And the passengers expect to get there on time. And sometimes, a passenger may re-enact the movie "Falling Down" and take out some aggression on the bus captain. Never have I heard that a client of an accounting firm would burst into an office and spit at people or yell if the audit report is not done fast enough. In contrast, my keyboard takes a beating every day. When I hit the keys, there is no complaining from that side.

Overall, I think I will stick to pen and paper. I truly admire how people moving people keep their calm with all the stressful situations they face. Maybe I am not cut for that, just as someone else may not want to sit at a desk all day writing about buses. ■



Bosch is Developing Dashboard with 3D Display

Bigger, more visually attractive, and with more and more features, digital displays are becoming a key feature of vehicle cockpits, according to German supplier Bosch. Their engineers believe that in the cockpits of the future, digital displays will play a key role in the interaction between drivers and their vehicles. With its new 3D display products, Bosch is responding to this trend. The products use passive 3D technology to generate a realistic three-dimensional effect that allows visual information to be grasped faster than when displayed on conventional screens. "Displays are increasingly becoming interactive systems that can better anticipate drivers' individual needs," says Dr.

Steffen Berns, president of Bosch Car Multimedia. In its press release about this Bosch says that forecasts suggest that the global vehicle display market will double from 15 billion dollars (13.4 billion euros) to 30 billion dollars (26.7 billion euros) by 2025 (source: Global Market Insights). And Bosch believes displays are increasingly becoming interactive systems. Berns: "Alerts that seem to jump out of the display are much more obvious and urgent." When parking, moreover, the rear-view camera image is more realistic, allowing obstacles to be detected earlier. When navigating street canyons, this 3D effect also plays a decisive role, as the spatial depth of the map display makes it immediately clear which building marks the next turn. The eyes are responsible for 90 percent of all human sensory perception. Bosch believes the future is all about interaction between users and displays. Its portfolio includes applications of all kinds – from small and flat to large and curved, and sometimes in unusual shapes such as round or with trimmed corners. Interaction even can take the form of voice or touch control – the latter also with haptic feedback. 📱



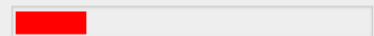
L4 Autonomous Bus King Long Apolong

Apolong is the result of cooperation between King Long and Baidu. It's the first commercial autonomous bus in China, fully reaching the high automation of L4. The Apolong 2.0, is an iterative upgraded product of Apolong after one-year's commercial operation. It has the autonomous driving capability in more complex situations. Compared with the first generation, the King Long Apolong 2.0 is equipped with an HW3.1 autonomous driving system, and has such upgraded configurations as high-performance Intel E5 and 8-core processors, and has a stronger computing power. Its higher-performance voltage stabilizing template can not only enable stable power supply but also maintain reliable endurance even in harsh environments such as cold and humidity. In respect of endurance, which has drawn much attention, King Long Apolong 2.0 has been equipped with the CATL power battery, which has increased from 42.3kwh to 49.3kwh in capacity, reduced by 50% charging time while increased by 20% driving mileage. King Long took the lead to enter the field of Internet of Vehicles (IOV) in 2010. Since then, it has been continuously exploring the intellectualization and networking of bus driving. 📱

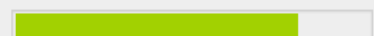
Snap Poll

Should the Government be Involved in Setting the Fares for Express Buses

No - 20%



Yes - 80%



The voting for this poll has ended

About us

Mitsubishi Fuso Truck and Bus Corporation (MFTBC; headquarters: Kawasaki City, Kanagawa Prefecture; President and CEO Hartmut Schick), announces the inauguration of a new 3S facility in Bangladesh. The product lineup will also be expanded with the addition of the Rosa, Canter, and the start of KD operations for the BM Bus Chassis under local business partner Rancon Trucks and Buses Limited (RTBL).

RTBL is unveiling its second FUSO sales location in Bangladesh at Chattogram. The city is a logistics hub containing the Port of Chattogram, one of the main seaports of the region that processes most of Bangladesh's export-import activities. Last year, RTBL inaugurated a newly built sales facility in Tejgaon, Dhaka. The new customer touchpoint will allow RTBL to further accelerate sales efforts of FUSO products within the country.

At the opening event, RTBL showcased the FUSO BM Bus Chassis, a future addition to the product offering in Bangladesh. RTBL is assembling the chassis for the Bangladeshi market at a KD production facility located in the Bhabanipur area near Dhaka, and will start sales of the vehicle early next year. With the bus chassis, MFTBC and RTBL aim to match the customer demand for quality heavy-duty buses



FUSO Strengthens Presence in Bangladesh with New 3S Facility

in Bangladesh's urban centers. Bus transit currently accounts for the majority of public transportation usage in Dhaka, which is one of the fastest-growing cities in the world.

RTBL also displayed the Rosa light-duty bus and Canter light-duty truck on the occasion of the inauguration. The two vehicles were brought to the market earlier this year in August through the Dhaka branch, and will now be available to customers in southern Bangladesh. Both of these products are shipped as BU vehicles from Japan. The introduction of the Rosa, Canter, and BM bus complements the existing range of medium-duty FA and FI, and heavy-duty FJ and FZ models, ensuring a full range of Fuso trucks and buses for the Bangladeshi market. ■

Innovative, Advanced and Systematic: Webasto Presents Latest Solutions at Busworld 2019

With you on every journey – this is the pledge Webasto stated with its presence at Busworld in Brussels, Belgium, from October 18 to 23, 2019. The global systems partner to almost all automotive manufacturers premiered its Thermal Management System for electrical vehicles. The holistic and systematic concept is able to provide optimal temperature to passengers, batteries, drive train and electronics. It comprises the Webasto CV Standard Battery, which, for the first time, can be experienced live in a bus driving in Brussels.

Smart and holistic thermal management from one single source: with the Thermal Management System for electric vehicles, Webasto introduces a new technology, new components and new units in one fully integrated system. The concept ensures constant and optimal temperatures for passenger, battery, drive train and power electronics. Thanks to its decade long expertise, Webasto is able to integrate all parts into one holistic system. This approach bases on the use of waste heat recovery principles to supplement cabin heating and heat pump operation – this leads to a battery range extension of about 25 percent. The system comprises the proven High-Voltage Heater HVH 100 with a constant efficiency of 95 percent. The Cronus Smart functions as the central unit controlling all components of the system. This, just as the modular design of the CV Standard Battery, ensures the optimal, tailored integration into any



vehicle system. Of course, all elements of the thermal management system are perfectly aligned to each other, but they are not depending on one another: The e.GO Mover from e.GO MOOVE GmbH displayed at the booth perfectly shows how the thermal management system from Webasto can be tailored to e.GO's very own battery system. ■




ZF Wins Innovation Award for its CeTrax Electric Bus Drive



Friedrichshafen/Brussels. ZF has received the Innovation Award from the Busworld trade exhibition for its CeTrax electric central drive. The electric drive allows buses used for public transportation to operate with zero emissions. ZF's technology beat out strong competition in the category for individual components and peripherals.

This trade exhibition could not have started better for ZF: The technology company was honored with the Innovation Award by the specialist jury the night before the Busworld exhibition in Brussels. The CeTrax electric central drive beat a tough and diverse field of competitors in the category for individual components and peripherals. "This award demonstrates again that ZF is a pioneer in the electrification of all vehicle segments. CeTrax is a central building block in developing future-proof mass transit, which ZF makes every effort to support," said Dr. Andreas Grossl, Head of Axle and Transmission Systems for Buses and Coaches at ZF, during the awards ceremony on Friday. "The trophy proves once again that we are on the right track with our strategy." This is not the first award that ZF has received this year for its electric bus drives. In February, the AxTrax AVE electric portal axle was presented with the

Environmental Protection Award at the ElekBu trade show in Berlin.


CeTrax: flexible and powerful CeTrax was specifically designed by ZF for use in buses and was presented to the public for the first time in 2017. The design of the drive is based on a plug-and-drive approach. CeTrax can be easily installed in vehicles with a conventional driveline layout. It is thus suitable for the development of new vehicles as well as for retrofitting existing platforms. This allows vehicle manufacturers and fleet operators to respond flexibly to market requirements and legal regulations. 

Efficient High-voltage Components for Fuel-cell Applications

Fuel-cell systems are a challenging technology that, much like combustion engines, requires sophisticated thermal management and supplies of air and hydrogen. Pierburg GmbH, a subsidiary of Rheinmetall Automotive AG, is applying its accumulated combustion engine expertise in pumps and valves to offer special products for fuel-cell vehicles. In addition to a leak-free control valve that is suitable for the specific requirements of fuel cells, two other products have been developed and occupy a special position in the market to date: a coolant pump and a hydrogen recirculation blower. Both are suitable for both low-voltage and high-voltage vehicle electrical systems with 400 and 800 volts.

The control valve, MPV (Multi Purpose Valve) for short, has a particularly compact package with low weight and is suitable for use on the cathode side of the fuel cell. It is resistant to de-ionized water and hydrogen and allows proportional and precise control. It combines low leakage with a high flow rate and low pressure loss at the same time. The valve operates as an air diverting or bypass valve for the air compressor or can be used as a pressure control valve as well as an isolation valve or shut-off valve for the fuel cell stack.

In addition to the proven pumps for 12 to 48 volts which have been in series production for a long time, coolant pumps have now been specially developed for fuel-cell applications, which are suitable for 400 volts or alternatively for up to 800 volts. These high-voltage coolant pumps are driven by a brushless EC motor with sensorless control. They are equipped with LIN / CAN bus communication and corresponding diagnostic functions. The pumps are rated for up to 2.2 kilowatts. They are suitable for use with de-ionized water and various coolants.

Fuel cell systems have a recirculation system for unused hydrogen on the anode side. An active blower is often used for this purpose, which must function safely and efficiently even at high concentrations of hydrogen. To ensure this, Pierburg has developed a hydrogen recirculation blower (HRB) based on a side-channel blower and without dynamic sealing elements to ensure ultimate hydrogen tightness over lifetime. The hydrogen recirculation blower is available in both high- and low-voltage variants. The blower can start from cold and has excellent NVH characteristics. It has a rating of 0.7 to 2 kilowatts or up to 400 watts in the low-voltage version. It is driven by a brushless motor with sensorless control; LIN / CAN bus communication and diagnostic functions are also available. 

MEET YOUR MONEYMAKER

Introducing the Volvo B8R



We are proud to present the Volvo B8R, the successor to the legendary best-selling Volvo B7R. 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 from the start, and with our worldwide service network you can rest assured your vehicles and business are always in good hands. Intercity or coach operations? The Volvo B8R is ready for every application. Making the new B8R a true moneymaker, and the safer choice. Explore more at volvobuses.com.my

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

VOLVO B8R

Made to just keep running

Volvo Buses. Driving quality of life





SUSTAINABILITY AND PROFITABILITY GO HAND-IN-HAND.

It can be borrowed – from future generations – or it can be earned from each and every aspect of your operation through a consistently focused and forward-thinking mindset. That mindset is a vital part of the Scania DNA – and we'd like to pass it on to you.

Scania Ecolution is a tailor-made partnership between Scania and you as a fleet owner, with the purpose to lowering your fuel consumption and reducing CO₂ emissions. And while we know that our customers are already buying the best hardware on the market – we always strive to become even better. That's really what it is all about. Because with the right partner, and the right tools – sustainability can be earned. Call +603 7845 1000, email smyenquiries@scania.com or visit www.scania.com.my

SCANIA ECOLUTION MAKES THE BEST BETTER

SCANIA