Neoplans Diamond Edition should be treasured

“For years, Neoplan has been renowned for its exclusive and innovative coaches. Over the years, Neoplan has become a cult feeling that you should experience as soon as you step into one of our coaches. For the 20th anniversary of the Neoplan Tourliner, we have created the Diamond Edition, which expresses even more the refined exclusivity that Neoplan stands for,” says Sebastian Lindner, responsible for MAN Corporate Communications Bus & Digitalization.

In the past decades, Neoplan has positioned itself as the exclusive coach brand in the industry. The Skyliner double-decker and Cityliner that were introduced about half a century ago were joined by a family member in 2003 with the Tourliner. “The Diamond Edition was designed to celebrate that anniversary, which also took part in the Busworld Awards and can also be experienced on a test drive. There is also a Skyliner and a Cityliner in the Diamond Edition version on the outdoor area. In the near future they will also be equipped with the new, ergonomic digital cockpit into which the intelligent MAN SmartSelect control system has been integrated,” indicates Sebastian Lindner.

Sebastian Lindner: “A diamond should be treasured and we have incorporated this philosophy into the overall concept of the Diamond Edition.”

» continued article see p. 2
‘DIAMONDS ARE FOREVER’

“The philosophy behind the Diamond Edition is ‘Diamonds are forever’, which means that our design was based on an exclusive, elegant, timeless and simultaneously contemporary product. Apart from that, you also treasure and take care of a diamond. From this point of view, we place great emphasis on after-sales, after-sales service, service contracts and offering real solutions,” Sebastian Lindner stresses.

Anyone entering a Diamond Edition will immediately experience what Neoplan stands for as soon as they see the front row, fully adjustable leather seats in the Tourliner or Cityliner. Nestle into the Skyliner on the front row at the top and enjoy the wide view, thanks in part to the glass roof. If you prefer things a bit more refined and exclusive, this Skyliner can be fitted with a ‘bistro’ compartment to pamper the 49 passengers.

The new electronic platform also ensures that the ‘Diamond Edition’ coaches are equipped with numerous gadgets enhancing safety, driving comfort and efficiency. For example, this coach features a completely new air suspension system that allows the coach to be lowered by about 20 millimetres on highways, which improves aerodynamics.

Furthermore, numerous new or upgraded assistance systems complete the coaches of model year 2024. These include the Emergency Brake Assist EBA+ and the new low-speed collision warning system, the TPMS tyre pressure monitoring system, an Alcolock preparation, Lane Change Support, Lane Keeping and Lane Return Assist, a Turn Assist System that activates automatically at speeds below 30 km/h and also detects nearby movements around the vehicle.

Other features include Adaptive Cruise Control (ACC) and Traffic Jam Assist that allows the coach to drive along in traffic jams up to 40 km/h but remains activated at speeds up to 60 km/h.
20 EBUSCO 2.2 BUSES FOR MULTIOBUS

Belgian bus trader Multiobus purchases 20 electric buses from Ebusco. For Multiobus, it is the fourth purchase contract with Ebusco, which will give them 36 Ebuscos by 2025, including 34 vehicles of the 2.2 variant.

Manager Olivier Van Mullerm clarifies the choice of the Ebusco 2.2 instead of the Ebusco 3.0. “We have had positive experiences with the 10 Ebusco 2.2s which largely met our expectations and have driven more kilometres than estimated. With the 20 additional Ebuscos 2.2, we are opting for standardisation of the vehicle fleet, making things easier for maintenance and infrastructure. On the Ebusco buses already in service with us, we will dismantle the pantograph as intermediate loading will no longer be necessary. Overnight charging is sufficient to drive all day, including in rural regions. By the end of 2025, we hope to have greened 50% of our vehicle fleet to meet the operating conditions of Flemish transport company De Lijn.”

The Busworld App replaces the paper catalogue. It has a floorplan, an exhibitor list, a product list, a seminar list and you can even see other visitors and contact them.

HOW TO DOWNLOAD?
Step 1: Activate your profile if you did not do this yet. An e-mail was sent to you from busworldapp@busworld.org on 1 September or later (when you ordered your ticket). You need to open this e-mail and activate your profile by choosing a password.
Step 2: Download the app on your phone (use QR code or look in your store for “Busworld”).
Step 3: Login with your e-mail and password. If you forgot your password, click on ‘Forgot Password?’ and you can set a new password.
Step 4: Use the app as much as you can.

The Busworld App and optimize your visit!
The 20th edition of this competition took place on 30 September with 14 competing vehicles: 8 buses and 6 coaches. And the winners are:

**BUS**
- **Label of Excellence DESIGN**
  - VDL Bus & Coach – Citea New Generation
- **Label of Excellence COMFORT**
  - Mercedes-Benz – eCitaro
- **Label of Excellence ECOLOGY**
  - Ebusco 3.0
- **Label of Excellence SAFETY**
  - Anadolu Isuzu – Citivolt

**COACH**
- **Label of Excellence DESIGN**
  - Yutong T15 E
- **Label of Excellence COMFORT**
  - Setra S 516 HDH
- **Label of Excellence COMFORT**
  - MAN Truck & Bus – Neoplan Tourliner L
- **Label of Excellence ECOLOGY**
  - Yutong T15 E
- **Label of Excellence SAFETY**
  - Setra S 516 HDH

As always, the best performances in the different sub categories are awarded with a best of category label.
A full day of interesting conversations and valuable insights is awaiting you during day 2 of the Busworld knowledge program. From the European market, vehicles and infrastructure of zero emission buses to hot topics as driver shortage and driver safety as main dish. A sweet dessert in the form of a network dinner is being served from 18:00 till 22:00.

Wednesday, third day of the knowledge program also means third half day of the European Zero Emission Bus Conference. Time to investigate how financially viable the switch to zero emission buses is today, and what business models are possible for you to implement in your business.

Are you more into the digitalization of your business? Don’t miss out on the Digital Mobility Solutions Conference starting at 09:30. From digital tools in your daily operations, to smart energy management for electric buses to autonomous vehicles and the role of bus and coach in a multimodal digital passenger transport world. Fasten your seatbelt as we are shifting gears!

TODAY (TUESDAY OCTOBER 10TH, 2023)

ZERO EMISSION BUS CONFERENCE (PAID)
LOCATION: MEETING CENTER HALL 7, AUDITORIUM 500
STATE OF PLAY AND PERFORMANCE OF ZEBS (2/2)
- 09:30: Opening Address
- 09:35: Electrifying Public Transport: RATP’s ZEB Journey in Paris and Beyond
- 09:50: The Other Electric Bus – A California Agency Deploys 33 Fuel Cell Buses & Additional Developments From the US ZEB Market
- 10:10: Data Analytics – Optimizing Operational Fleet Performance and Planning Future Fleet Decisions
- 10:50: Efficient Hydrogen Refueling Solutions – Performance and Innovations

THE INFRASTRUCTURE CHALLENGE: BATTERY AND HYDROGEN
- 11:30: Panel – HRS Infrastructure: Challenges and Solutions
- 12:15: Challenges When Scaling: How to Ensure Operational Readiness at the Lowest Cost in the EV Transition
- 12:25: Panel – Charging Infrastructure: Challenges and Solutions
- 13:10: Closing

DRIVER SAFETY SEMINAR (FREE)
LOCATION: MEETING CENTER HALL 11, LEVEL 3, ROOM 1122
- 14:00: Opening
- 14:15: Launch of Academic Report on Bus Driver Safety
- Keynote: Available and Possible Risk Reducing and Consequence-Reducing Measures in Bus Transport
- Panel Discussion: Perspectives on Safety From Bus Drivers and Soft Road Users
- 14:45: Safety Systems, Solutions and Requirements
- Keynote: Introduction to the EU General Safety Regulation
- Panel Discussion
- 15:45: Policy Making for Improved Safety of Bus Drivers and Passengers
- Keynote: Towards a European Standard for Driver Safety in Low Floor Buses
- Keynote: Safety Learning System Based on Analysis of Recent Accidents
- 16:15: Implementation of Safety Tools and Measures by the European PTAs
- Panel Discussion
- 17:00: Closing

DRIVER SHORTAGE ROUNDTABLE (FREE)
LOCATION: MEETING CENTER HALL 11, ROOM 1121B
IRU, the voice of commercial transport operators, is happy to invite you to an IRU roundtable at Busworld, “Driver shortages in the road passenger transport industry”, featuring decision-makers and road transport representatives. The roundtable will explore the work that is currently being done, and the steps that are still needed to tackle the shortage of drivers.

Take part in the discussion and share your ideas, best practices and solutions!

NETWORK DINNER (PAID)
TIME: 18:00 – 22:00
LOCATION: MEETING CENTER HALL 11
PRICE: 125 EUR PP
European Zero Emission Bus Conference and Busworld Foundation Network Dinner. A great opportunity to meet with vehicle manufacturers, suppliers and major European public and private transport agencies & operators, as well as speakers from the various conferences taking place during Busworld Europe.

TOMORROW (WEDNESDAY OCTOBER 11TH, 2023)

ZERO EMISSION BUS CONFERENCE (PAID)
LOCATION: MEETING CENTER HALL 7, AUDITORIUM 500
ECONOMICS OF ZEBS
- 09:30: Opening Address
- 09:35: Total Cost of Ownership Case Study on BEBs and FCBs
- 09:55: Panel – Building a Strong Business Model for BEBs (Battery Electric Buses)
- 10:45: Hydrogen Fuel Cells as Enabler for Mobility Decarbonization. Symbo’s Solution for Buses & Coaches

THE FUTURE OF FUNDING MODELS FOR ZEBS AND ASSOCIATED INFRASTRUCTURES
- 11:30: Panel – Financing a Full Fleet Transition. Public Funding Options
- 12:20: 1198 Buses Powered by RETIREE: A Journey by Hydrogen-Electric
- 12:30: Panel – Building a Strong Business Model for FCBs (Fuel Cell Buses)

DIGITAL MOBILITY SOLUTIONS CONFERENCE (FREE)
LOCATION: MEETING CENTER HALL 11, LEVEL 3, ROOM 1122
- 09:30: Opening - Welcome and Policy Making on Data Driven Mobility
- 10:00: Bus & Coach in Next Generation Mobility Concepts
- Keynote 1 by ITxPT
- Keynote 2: Insights From the Bus Services Industry on the EU Multimodal Digital Mobility Services Initiative
- Panel Debate
- 11:30: Digital Operational Excellence via Telematics
- Keynote
- Panel Debate
- 14:00: Smart Energy Management When Deploying Electric Buses
- Keynote 1 by European Commission
- Keynote 2 by Hitachi Energy
- Panel Debate
- 15:45: Digitally Enhanced Driving
- Keynote: ‘The European and member states’ approach on the implementation of autonomous buses and shuttles” by ERTICO – ITS Europe
- Panel Debate
- 17:00: Announcement of the Busworld Digital Awards Winners

ADD SESSIONS TO YOUR SCHEDULE VIA THE BUSWORLD APP:
Coffee and a piece of Turkish fruit candy, you can’t avoid it at Busworld. An overwhelming number of manufacturers from Turkey fill the halls of the bus show. Ambitious, entrepreneurial and favourable wage costs are the keys to their success.

It almost looks like an invasion of Turkish bus manufacturers and suppliers at Busworld. Established manufacturers and start-ups present their top products. The Turkish bus sector has become a major global player in just a few decades.

The rapid growth of this industry is rooted in the need for public transport. No big buses but compact vehicles in the 6 to 10-metre category to carry 30 to 40 passengers. Minibuses are in the DNA of Turkish companies. They are affordable for the many small businesses. Turkey’s large production of minibuses made its entry into the foreign market possible as European manufacturers ignored this segment due to too limited production numbers. So Turkish companies filled the gap in the market. And in no time these manufacturers were able to work their way up to solid competitors with vehicles that matched European standards.

‘The focus of the industry on public transport is the basis of the success of Turkish bus manufacturers. Public transport was in high demand during the 1970s. Many entrepreneurs responded immediately to this trend. In addition to bus manufacturers, a multitude of suppliers emerged,’ says Emre Hür, manager of bus manufacturer Karsan.

Turkish manufacturers have a significant competitive advantage over Western European manufacturers. ‘Lower wages and a 45-hour work week play in our favour. There is also a large supply of labour, unlike the shortage of workers in Western Europe. But also the faster development of our vehicles,’ ensures a more favourable position,’ says Emre Hür. Karsan also limits diversification by no longer building diesel or CNG-powered vehicles.

In an already crowded Turkish market, there are still newcomers like Habas which is showing off three brand new buses at Busworld. Bus manufacturer Habas is a branch of a 76-year-old and large holding company that produces industrial gas and medicinal applications. Things are moving fast at Habas. Started in 2021 during the pandemic and already present with three final products to make it happen in Europe. ‘The flexibility of production, the modularity of our vehicles and also the proximity to Western Europe are our assets. In less than three days, we can deliver buses to the most remote corners of the European continent,’ says Levent Ozbek, sales manager of Habas. However, Turkey’s industry faces challenges such as terrifying inflation and an unfavourable exchange rate. ‘But our years of experience, our perseverance and cooperation with strong suppliers, help us cope even in these difficult times,’ says Sevcan Karaman, sales manager of Anadolu Isuzu.

Turkish invasion with newcomers and established names
Busworld goes Digital!

For the first time, Busworld was organizing and will be awarding Digital Awards on Wednesday, October 11th on the Digital Mobility Solutions Conference. The world of buses and coaches cannot be thought today without all the digital gadgets and solutions that help to be as safe, efficient and sustainable as possible. Every vehicle has up to 10,000 semiconductor chips of different kinds on board, the connectivity with the diverse platforms like ITxPT is ever more sophisticated. For the first time, also a new “V2X” System was entered in the contest, which helps to communicate the vehicle with the surrounding infrastructure and other vehicles. The nominees could enter their digital products, that do not have to be complete vehicles, in four different and fascinating categories: “Digital On-Board Comfort” comprises everything from new entertainment systems to Human Machine Interface (HMI) Solutions, that make the voyage experience for passengers as well as drivers more enjoyable and comfortable. “Digital Operational Excellence” is very important to manage your fleets in a way that combines efficiency and sustainability with telematics and other systems, that cannot be omitted today by any means. “Digitally Enhanced Driving” is of overarching importance today, as there are not enough drivers around anymore. Partly and fully autonomous vehicles are also demonstrated at the Busworld grounds!

But also modern ADAS systems of the SAE Levels 2 to 4 are very helpful to support the driver in tricky situations and when he is not top fit any more. Safety is a unique point in this category. Last but not least, the category “E-Mobility Management” has been incorporated in the awards. Modern E-Mobility is not any more about vehicles alone like in DieselTimes, but about whole systems to operate and charge a fleet of buses in a way that saves time and money. The more such a system can deliver, the better the chances, to win an award here. All the twelve products on the shortlist offer unique and innovative features and you should come and see, who will be the lucky winners on Wednesday!

Busworld goes Digital!
BYD premieres two new pure-electric buses and ground breaking technologies alongside two existing models in Europe: the BYD eBus B19 (18.75m) and the BYD eBus B15 (15m). The 12-metre BYD eBus B12 and the BYD-UNVI DD13 Double-Decker coach both make their European debut at the Expo. The all-new 12-metre BYD eBus is the first bus to utilise BYD’s revolutionary Blade Battery Chassis bringing a new level of safety and energy efficiency and exceptional range.

Making its world premiere, the BYD-UNVI DD13 Intercity double-decker coach combines BYD’s expertise in battery and chassis technology with UNVI’s renowned skills in coach body build and design.

The BYD 12-metre B12 eBus brings a new generation of integrated chassis technology to public transport operators in Europe. In addition, and making its world premiere at the BYD stand is the 13-metre customisable pure-electric intercity double-decker coach, the BYD-UNVIDD13, an exciting collaboration between BYD and European bodybuilder, UNVI.

With BYD’s latest generation of 12-metre electric buses, BYD presents its all-new pure-electric bus chassis which integrates the Lithium Iron Phosphate Blade Battery within the chassis structure. This ground breaking Blade Battery Chassis technology also utilises a new 6-in-1 controller with Silicon Carbide technology, together with two innovative wheel hub hairpin motors. Combined, these bring a multitude of benefits to BYD’s 12-metre bus including enhanced energy efficiency, performance and durability. The Blade Battery, with a maximum capacity of 500 km in one charge reducing the need for regular charging, making the BYD eBus B12 an excellent choice for busy bus routes.

Always committed to developing strong partnerships, BYD has collaborated with UNVI to produce a new 13-metre double-decker coach for European public transport operators. The alliance brings together BYD’s expertise in world-leading battery and chassis technology and UNVI’s exceptional experience in body design and build technology. The pure-electric BYD-UNVI DD13 intercity double-decker, equipped with ADAS for added safety, makes its world premiere.

The pure-electric BYD-UNVI DD13 intercity double-decker BYD, the world’s leading NEVs manufacturer, has been able to master core technologies of the entire industrial chain, developing its own powertrain systems, power batteries, drive-motors, and motor controller system.

Founded in 1995 as a rechargeable battery maker, BYD now boasts a diverse business scope covering automobiles, rail transit, new energy, and electronics, with over 30 industrial parks in China, the United States, Canada, Japan, Brazil, Hungary, and India.
Cameras replacing classic mirrors

The driver of a city bus or a coach wants a clear picture of what is happening around the vehicle. This way accidents can be prevented. Classic mirrors have their limitations. Cameras and radar offer greater security. Manufacturer Mekra is taking the lead in the field of visual security for long vehicles such as buses and trucks.

A collision in a blind spot is the major concern of drivers. Unfortunately, an arsenal of classic mirrors is still sometimes not enough to avoid such tragic accidents. Camera technology does allow the non-visible area around the vehicle to be captured.

Many vehicles at Busworld, are meanwhile equipped with the latest security equipment. German manufacturer Mekra offers homologated camera systems that replace the old-fashioned wing mirrors. The company boasts decades of experience in developing systems with camera monitors. ‘Camera images offer particularly many advantages over mirrors.’ European regulations allow the switch to cameras but only for certified products,’ says Sven Felbinger of Mekra.

‘Our digital cameras display a wide view of what is moving in front and to the side of the bus. ‘In case the visualisation does go wrong for a moment – which is extremely rare – the screen in the cockpit immediately goes black and the driver knows he needs to pay extra attention,’ Felbinger explains. Mekra also developed a radar system for monitoring the blind spot on the right flank. If the driver forgets to use the indicator, an integrated gyroscope registers the lateral movement of the bodywork and the driver hears a warning signal in case of approaching danger.

Other benefits of cameras include better visibility in the dark thanks to bright technology and less vibration. The long arms on which the classic mirrors are attached also restrict space when manoeuvring and are vulnerable in a collision. The large exterior mirrors also require extra attention in the car wash to prevent damage. Cameras, on the other hand, promote vehicle aerodynamics. According to several users, camera monitoring can save 3 to 5 per cent fuel.

What does AI suggest about buses?

In the digital world, artificial intelligence is steadily advancing and providing answers faster than you would ever have imagined. Busworld Times Daily asks one or more questions about the bus and coach sector daily on AI platforms such as Bard and ChatGPT. The answers are sometimes spot on, sometimes outdated or hilarious, and sometimes visionary. So, to be clear: this is AI’s vision, not Busworld’s.

Bus stop becomes living room

Bus stops will be equipped with technology that offers passengers real-time information on arrival times and disrupted schedules. At stops, you have access to free wireless internet, you can charge your smartphone and buy a ticket. Solar panels provide the necessary energy. In addition, the bus stops are equipped with shelters, benches and lighting. They are conceived as living rooms with an artwork on the wall, with plants or trees and maybe even a small water feature. This way bus stops become attractive stopping points that invite you to take the bus.

Hacking a bus, not done!

Although buses are equipped with quite a bit of software, they are not a typical target of cybercrime. Travellers are very unlikely to use their smartphones to hack the software of buses during their ride. Information technology is sufficiently separated from the passenger compartment and security systems with ‘firewalls’ and ‘authentication protocols’ block unauthorised access. Even when passengers communicate via the Wi-Fi network of the bus, they do not gain access to critical software. Travellers should also realise that hacking a bus is illegal and criminal.

Take the coach for a wonderful massage

While it is difficult to determine what the future passenger seat will look like, current trends and technologies do indicate a direction. Ergonomics is becoming increasingly important with increased seating comfort, improved back support and facilities that allow personal adjustment of the seat. An air-conditioned seat with custom temperature setting and massage technique is desirable. The seat is adjusted using a built-in touchscreen or a smartphone app. Naturally, the seat is made in sustainable, ecological and recyclable materials. Connections are provided so that travellers can enjoy experiences in augmented reality (AR) or virtual reality (VR) applications during guided tours. Sensors in the seat monitor the passenger’s well-being.
Isuzu strengthens its presence in the bus market

At Busworld, Anadolu Isuzu has unveiled the Novo VOLT, the latest in its range of electric vehicles. The Turkish manufacturer also shows other models, including the Kendo 13 CNG 100% biogas compatible, the Isuzu Grand Toro and the all-electric NovoCiti Volt and CitiVolt models.

Anadolu Isuzu started in the automotive sector in 1965 with the production of trucks and motorbikes. Today, the company is part of the Anadolu Group, which combines Isuzu Motors and Itochu Corporation. Anadolu continues to strengthen its presence in the bus market by offering several vehicles at Busworld. Between 2015 and 2022, the company developed its bus business and supplied more than 1,200 buses and midi-buses in France. By mid-2023, their market share had risen to 9%, placing them among the top three major players.

What can you expect to see at Busworld?

→ The Novo-Volt Anadolu. The Novo-Volt Anadolu is the brand’s first electric bus that can be used both as a bus and as a coach and succeeds the Novo model launched in 2008. This bus is 7.30 m long and can comfortably transport 29 passengers. The 165 kW battery pack provides a range of 225 km and is positioned in the chassis in such a way that the vehicle is well balanced. The electric motor generates 320 kW.

→ The NovoCiti-Volt is a 12-metre-long midi-bus designed for public transport. It is equipped with 260 kWh batteries and can cover a distance of about 400 km. The vehicle features low entry with wide access doors. The driving position is very ergonomic and can be adjusted to the personal needs of the driver.

→ The Isuzu Kendo CNG is a coach that meets strict European emission standards and safety regulations. The vehicle is equipped with an engine suitable for biogas and CNG.

→ The Isuzu Grand Toro is a midi-bus that can be used as a tourist service vehicle, airport shuttle or for regional transport. It is powered by a 206 hp E6 engine and comes with 37 seats and a large luggage space.

For the distribution of Anadolu Isuzu products in Belgium, the manufacturer relies on Technical Point-Automet, a company based in Diest and Kortrijk.

20 years of wellness on wheels.

THE NEOPLAN TOURLINER CELEBRATES ITS 20TH ANNIVERSARY.

For 20 years now, our NEOPLAN Tourliner has been fascinating drivers and passengers with its exclusive design, first-class comfort and innovative technology. Over the decades, this timeless elegant coach has remained committed to keeping the bar high in the world of travel. Now, having arrived at its prime, the Tourliner is once more ready to ignite your drivers’ passion for the road.

www.neoplan.com
CATERING POINTS

1. 4 Eat Fastfood
   Belgian Fries & burgers

2. Nina
   Assortment of Italian pasta & pinsa

3. Peule et Poulette
   Chicken nuggets, chicken wings and fries, soup, tom ka kai & wrap with chicken

4. Pico Bello
   Assortment of pasta & panini

5. Thai Café
   Thai Specialties

6. Be Shop 5
   Mini market with sandwiches, hot dishes, soft drinks, snacks and hot beverages

7. Brasserie 58
   Table service ‘Brasserie’

8. Eaters
   Asian streetfood with pokeballs & bahn mi

9. Mr. Boudin
   Belgian upgrade hot dog

10. Belgian Beer Bar
    Belgian beers, salads, sandwiches, croques & sweets

11. O’Gin bar by Open Up Farm Distillery
    Gin bar & meet stew based on gin

12. Dim’s
    Dim sum & bao

13. Fritkot De Carte
    Belgian fries & frites & poulcyroc

14. Mamy
    Croque Monsieur, pancakes & cookies

15. Joris
    Assortment of belgian artisan sweets

16. Hot Dog
    Hot dogs

17. Cocotte en Scène
    Fresh juices, smoothies & healthy bagels

18. Le Pain Quotidien
    Bagel sandwiches, salads, soups & sweet

19. Ellis Gourmet Burger
    Famous burgers & fries

20. Be Shop 9
    Mini market with sandwiches, hot dishes, soft drinks, snacks and hot beverages

21. Chess Catering
    Self-service with pasta, salads, vol-au-vent, 1/2 chicken

22. Les délices d’Eric
    Assortments of hot coffee, pancakes, waffles, sweets, sandwiches, ...

23. Kalleo Waffle
    Belgian waffle & croque monsieur

24. La belle liegnoise
    Waffles, sweets

Opening hours catering
07-11 OCT
10:00 until 19:00
12 OCT
10:00 until 18:00
OVERVIEW OF THE EXHIBITORS

LEYLAND HOSE & SILICONE SERVICES LTD 9238
Linde 435
LOHR ENERGY 682
LUMINATOR TECHNOLOGY GROUP 428
LUMIPLAN 428
M.S. O'TOMOTIV 773
MAFELCO 530
MAPFRE IBERIA S.R.L. 751
MAGNA POWERTRAIN ENGINEERING CENTER STYR 816A
MAGNETIC NORTH 683
MADRIDE 731
MAN & TRUCK BUS 401
MARCOPOLO S.A. 702
MASAT 507
MATTEI GROUP 535
MAYAKO GmbH & Co. KG 742
MCY SAFETY BELTS SRL 724
MCY 601
MCY TECHNOLOGY LIMITED 793
Moberg 559
MELLOR 505A
MERCEDES 708
METATRONIX 410
MEVIS AUTOMOTIVE 828
MINGSHANG TECHNOLOGY CO., LTD. 139C
MIT AUTOMOTIVE 150
NM SP. Z O.O 759A
MOBILE CONTROL SYSTEMS 423
MODIS 688,691
MOVON 693
MUL ELECTRONIC 788
NACI CO., LTD. 716
NANING AE SYSTEM TECHNOLOGY 116C
NAVI TECHNOLOGIES 489
NET FLOOR COVERINGS 991
NINGBO MEIXING AUTOHOUSE CO., LTD. 943
NISSHIN 728
NISO TEC AB 720
NPR SRL 720
NEW NIXON SOLUTIONS 116C
OCELLION POWER SYSTEMS, INC 116C
ODA INDUSTRY 981
ODYSSE (GMBH ELEKTRONIK & SERWIS) GMBH 3880
OFFICE MARIO DORN SPA 536
OFLUX 3884
OLUNA AUTO GLASS 603A
OMR DIMITRIUS & HANDEL KARLOS ROTTGEN GMBH 761
ONAN AB 418
OPTITRAC 8158
ORIONER, LTD 621
ORTHOCAR GLASS 642
ORTM ELEKTRONIK A.G. 970
ORTM PLASTIK 835
ORTM UNIMED AUTOMOTIVE 835
ORTM 505B
ORTM UNIMED AUTOMOTIVE 656
ORTM 505B
ORTM 656
ORTM 703
OSKAR RABOLI A.S. 681
OSULAS R.A. 701
OSTERET 712C
Pacific Tur 712C
PAULTON ENGINEERING LTD 936
PALLAZZI SAFETY BELTS 750
Palmpe Design 1140C
PASS 6088
PASSENGER LIFT SOLUTIONS 618
PAYERL 922
PEI MBRANDING OF P.C.I. SRL 676
PETEL COMMUNICATIONS 767
PERNO 436
Pikate 756
PICKEN CONTACT T-EVENTILATION GMBH 718
PILABS GMBH 9128
PLANKTON AUTOMOTIVE FINLAND 932A
PLANTING AUTOMOTIVE 650
PLANT SEATING 650
PNEU INDUSTRIES 1177
PLASTIC OMNIUM 952
PLASTOFORM D.D. 1160B
POLYAM Electric Kft. 767
POLITECNOICA Srl 1139A
POLYTECHNIE SEAT TECHNOLOGY 524
PIT-PLATE ELECTRONIC & TECHNOLOGY Kft. 6088
PRIMA INDUSTRIES 515
PROTECTRA EX-IX 11583
PURPLAST AUTOMOTIV 670
PSL 949
PTAC 1914C
QUEENS MACHINING GROUP CO., LTD. 1161B
RAA 792
RATPOLGALI 7764
RAMPI CARL SPA 606A
RAUHERS 716
REKOF EUROPE 614C
REFU DRIVE GMBH 8089

DOWNLOAD THE BUSWORLD APP AND OPTIMIZE YOUR VISIT!
The Volvo BZL with a 9.7 m MCV body full electric single deck city bus boasts of cutting-edge body work from MCV with 37 different configurations ranging from 9 meters to 13 meters in length. This comprehensive range includes a body built into a low entry or a low floor option in some of the lengths for both left hand driving and right-hand driving.

Key highlights of the platform:

1. Low Entry and Low Floor: The Volvo BZL platform could be body built into both low entry and low floor options, accommodating passengers with varying mobility needs. Low floor buses from 11.3m provide easy access for passengers with reduced mobility, while low entry models offer a balance between accessibility and seating capacity.

2. Seamless Integration: Despite the wide array of configurations, the Volvo BZL platform maintains consistency in design, technology, and sustainability across all different body variations.

3. Safety: All body variants built on the Volvo BZL platform, regardless of length, are equipped with enhanced safety features, including driver run-away prevention, CMS, intelligent speed assist, corner lights and crash frame structure to protect drivers in addition to smooth interior design aimed at minimizing passenger risks in the event of an accident.

4. Pedestrian safety: The MCV body features for the Volvo BZL offers an enhanced geometry with curved corners that not only enhances driver visibility but also reduces pedestrian head impact in case of any collision.

5. Accessibility and Comfort: Features such as electric powered ramps, large wheelchair areas, high-back comfort seats and spacious interiors ensure that all passengers can board and travel comfortably.

The cooled, high-performance lithium-ion batteries with efficient NMC chemistry (nickel manganese cobalt oxide) are modular in design and crash-safely housed on the roof (optionally four to six battery packs, 308 kWh to max. 462 kWh). Active battery balancing ensures optimal efficiency and operational readiness of the batteries. The flexible option of attaching the CCS-2 charging socket to the front right or rear right side wall as well as the use of charging rails on the roof (also vehicle mounted pantograph if desired) enable a comfortable and efficient charging process that is digitally monitored at all times.

The robust and lightweight construction of the MCV 127 EV made of solid stainless steel ensures pleasant, safe and, above all, low-noise driving behaviour and all this with emission-free operation. Even in the cold season, the MCV C127 EV meets this requirement thanks to a purely electric heater in combination with a CO2 heat pump with complex thermal management and purely electric additional heating.

The bus is powered by a central synchronous motor mounted on the vehicle, which acts directly on a conventional portal axle from ZF and mobilizes a maximum of 250 kW and 3,000 Newton meters of maximum torque (17,190 Nm directly at the wheel).

With state-of-the-art facilities located in Egypt, MCV has the capability to deliver 5,000 buses per year. It supports global customers with a wide range of products: - Double Decker, city buses and School buses - Tourism and Intercity coaches - Airport buses - BRT projects.
What does AI suggest about buses?

Chatting to each other from the ideal seat

To transport diverse and diverse groups as well as passengers with different comfort requirements, passenger seats need to be designed in a much more flexible and modular way. This allows for different seat types, smoothly changing the seat configuration and creating zones where small groups or family members really sit with each other. 360° rotatable seats are designated to increase social contact during the trip. Consideration should be given to seats or available spaces for wheelchair users to make travel more inclusive. The seat covers are sleek, aesthetically pleasing and contribute to the overall visual look of the interior. Innovations in seat design, configuration and storage room for hand luggage are necessary to carry the maximum number of passengers without sacrificing space and comfort. Seats equipped with AI applications enhance the personalised travel experience.

Small groups experience more than a large group

Group tours with coaches remain attractive to prospective travellers provided their organisers are responsive to changing needs and preferences of tourists. Travellers are more concerned than before about the environmental impact of their travel and often consider coaches as unsustainable. New applications with virtual reality tours can offer travellers a more personal, immersive experience and take them to the site prior to a visit. They also expect more authentic, complete experiential trips even though these are not always available for classic group tours. Therefore, travelling in smaller groups will be more common, even within a larger travel company. This allows simultaneous journeys for foodies, historians, culture freaks and families with young children.

Driver, 2 beers and 2 spaghetti’s please

As future coaches are equipped with self-driving technology, drivers no longer need to pay attention to traffic or navigation. They focus on other tasks such as serving passengers. Coaches have a wide range of drinks and dishes that drivers can serve to their passengers. The driver can also spend more time answering questions and advising travellers about their travel plans. Either way, the coach driver of the future needs to be much more customer-centric than it is today. Self-driving coaches also provide travellers with more opportunities to hop off somewhere along the way for a visit and rejoin the coach afterwards to continue their journey. Thanks to the latest technologies and features of coaches, they will significantly improve the travel experience for drivers and passengers.

Charging and refuelling stations hold the key

For how long diesel will continue to be the most common fuel for coaches depends on technological innovations, environmental regulations and market trends. As an increasing number of countries and regions impose stricter emission standards, people are being pushed towards more clean energy sources. From that perspective, there is increased interest in alternative propulsions with CNG, LNG, hydrogen and batteries. As battery technology evolves and charging infrastructure becomes more widely available, electric buses are gaining ground. The total cost of ownership is a determining and critical factor in selecting a technology. The availability of charging and refuelling stations for alternative propulsion systems is a key element in the energy transition. Ultimately, the transition from diesel buses and coaches is determined by a combination of environmental factors, technological evolutions, economic aspects and public policy.
Tremonia Mobility, formerly known as Mercedes-Benz Minibuses, has in collaboration with Elinta Motors from Lithuania, successfully developed and launched this year its first 100% electric city minibus, based on the established and well-known City 45 diesel model. With the newly gained independence Tremonia Mobility says it has made significant progress in the field of sustainable transportation and showcases this in hall 4, booth 425.

With the takeover in 2022 of Daimler’s minibus division Tremonia decided to intensify its research and development activities for electric minibuses and looked for technical solution from third parties. In Elinta Motors it found a dedicated partner and the collaboration resulted in the development of electric vehicles, “that set new standards in performance and eco-friendliness”, as Tremonia describes it. Their new product based on the City 45 is tested by TÜV focusing on “Standardized On-Road Test” (SORT). Tremonia reports that the City 45 ELECTRIC demonstrated an “impressive range of up to 310 km (SORT 2 cycle, mixed operating)”.

The test was done with a vehicle equipped with a 115 kWh battery, a 150 kW (1,250 Nm) engine and under optimal conditions. The manufacturer emphasizes that this achievement solidifies its “commitment to deliver electric minibuses that offer remarkable range without compromising on quality or passenger experience”. Jürgen Knothe, CTO of Tremonia Mobility: “These outstanding figures validate the dedication and expertise of our team, as well as the successful collaboration with Elinta Motors. Our first-generation City 45 ELECTRIC has now proven to be a game-changer, and we still continue optimizing and innovating to deliver a perfect electrified minibus to our customers.”

Tremonia Mobility reaches 310 km with new City 45 ELECTRIC

FIRST ORDERS

Tremonia received already its first orders for the new City 45 ELECTRIC. Two major transport companies, one in Luxembourg, Voyages Emile Weber and the MVVG (Mecklenburg-Vorpommern) Germany, have placed orders for the new innovative electric City 45 ELECTRIC. MVVG, which operates around 190 buses every day, has shown its commitment to a more environmentally-friendly future by placing an order for three City 45 ELECTRIC minibuses. Family-owned business since 1875, Voyages Emile Weber from Luxembourg, placed its first orders for the City 45 ELECTRIC minibuses. After having thoroughly tested the prototype vehicle this spring. The vehicles will be delivered by the end of 3rd quarter 2023. The City 45 ELECTRIC combines style and functionality, and is equipped with advanced safety features and innovative technologies. For 2024, Tremonia Mobility has already announced an expansion of the electric product range to include the larger minibus model, City 75 ELECTRIC.
Busworld sphere
Fogmaker no longer uses PFAS in its extinguishing agents

Firefighting specialist Fogmaker is the first to introduce a liquid extinguishing agent Eco 1 that does not contain any harmful PFAS chemicals. Extinguishing a burning electric vehicle remains a worrying job.

A city bus or coach catching fire is the major concern of producers and operators. That is why a lot of manufacturers are turning to fire protection systems from Swedish company Fogmaker. Extinguishing a fire is done by spreading a high-pressure water spray. One litre of extinguishing fluid is converted into 1,700 litres of steam. This way, damage can be limited.

Fogmaker’s technology has already sufficiently proven its benefits in combustion engine vehicles. All components of the bus that could potentially overheat and possibly catch fire are immediately extinguished. European regulations require the installation of an extinguishing system in all new vehicles from 22 travellers. A major challenge for Fogmaker is fighting a fire in an electric bus. There is still no international standard for fire safety in zero-emission vehicles. It is trial and error because the market is new to everyone. ‘Currently, it remains a big question mark as to how a fire can be extinguished in an electric vehicle,’ says Johan Stark, manager at Fogmaker.

‘Our current installations are capable of fighting a fire when it occurs at the engine or drive unit but an internal fire in a battery cannot be extinguished for now. At the moment, we do have the ability to cool down the burning battery to save time so that passengers can quickly get out and get to safety. Extinguishing an electric vehicle requires an awful lot of water. ‘For a high-volume vehicle like a bus, that means a huge challenge,’ Johan Stark stresses.

How a burning battery can be controlled, it’s as clear as mud. ‘There are no statistics on battery incidents because the sector is relatively new. And adequate regulation is non-existent. Moreover, battery developers and manufacturers are not divulging any details on this matter. There is an air of mystery in the industry. ‘Because the very first company to invent a solution to quickly extinguish a burning battery will immediately be at the top worldwide,’ the Fogmaker manager says.

Some solace for firefighters is the fact that 50 to 60 per cent of fires originate from mechanical components of a bus. Burning batteries are still an exception but the share of electric buses in the overall transport market is therefore limited.

Fogmaker does take another step in making its fire installations ecological. From now on, harmful PFAS chemicals are eliminated from the liquid extinguishing agent. The Eco-1 will be implemented in extinguishing systems from next year. An international standard for banning PFAS is not likely to be imposed until 2027.
Streamax unveils safety advanced solutions

The Shenzhen-based technology company, Streamax has been active internationally since 2002 in the development and manufacturing of hardware and software systems offering AI-powered onboard active safety, driver assistance, and video telematics solutions. Currently, their onboard technologies are widely used in over 3.5 million commercial vehicles in over 100 countries worldwide.

“With the new Intelligent Bus Central Unit solution (IBCU), we differentiate ourselves from other solutions with its ‘open system’ architecture,” says Balazs Berki, business development director. “IBCU solution effectively addresses driver safety systems, public transit security, passenger information services, and dispatching and operation systems, offering a comprehensive public transport solution on a single platform. This unified hardware platform has the capacity to run multiple operating systems (Linux or Android) and software applications concurrently, allowing for the seamless addition of features through over-the-air software updates, without the need for additional terminal devices.”

“Information technology and intelligent systems are rapidly gaining importance in buses and coaches. The implementation of it in solutions from different manufacturers poses many challenges in terms of maintenance, interconnectivity and usability. For example, disparate systems such as CCTV equipment, AI-enabled devices for driver and vehicle safety management, dispatching and control systems and passenger information service systems typically operate isolated.”

Streamax introduces the intelligent Blind Spot Information System (BSIS) & Moving Off Information System (MOIS) and Driver Drowsiness and Attention Warning (DDAW) solutions. The AI-powered detection capabilities align seamlessly with the strict safety provisions set out in the UN R151 and UN R159 regulations. The Driver Drowsiness and Attention Warning (DDAW) system, equipped with a professionally integrated AI Driver Monitoring System, warns of drowsiness, all kinds of things that could distract the driver. It also reminds the driver of unsafe driving habits. In response to these challenges, Streamax is therefore proud to introduce the next-generation Intelligent Bus Central Unit solution, in addition to the above mentioned two systems.
The entire Meeuwissen family (father Toine, sons Thomas and Christophe and daughter An-Sophie) is present at Busworld. The male half at Otokar’s stand, the female half at VDL’s stand. Simultaneously, the family celebrates anno 2023 the 25th anniversary of its company AM Buses, which began as a trade in second-hand buses and coaches and now also imports Otokar for the Benelux countries.

A year and a half ago, Toine’s sons, Thomas and Christophe, took over AM Buses. They now face the task of making the transition to electric transport.

So, it all started 25 years ago with a reckless move by Toine. He had been in the bus business for years for the former Bova and decided to start ‘for my own’. His initial capital amounted to 10 million Belgian francs, comparable to about 250,000 euros now. A capital he invested entirely in the purchase of eventually more than a hundred buses that had been used by the former English Rhine Army, old and worn, but he was able to get them at a favourable price.

His wife, Hilde, was not happy about his move and soon saw how the newly started family business was going in the wrong direction. “All my money had been spent on it. But after three weeks, I had already sold 55 of them and earned my first money. Within the year, the start-up costs incurred were recovered and we made a nice profit,” Toine says. Today, he keeps contact with the customers of ‘his generation’ and Thomas and Christophe with the younger generation. And that’s going well, Thomas and Christophe agree while smiling.

“Ch well, I belong to a dying breed and notice that the younger generation communicates with each other in a different way, as an older person you shouldn’t want to be involved in that” Toine says. His sons have clear roles. Thomas is mainly focused on after-sales activities and he is the contact person for sales activities in the Netherlands, while Christophe focuses mainly on sales of new and used buses and coaches in Belgium, Luxembourg and France.

**AN-SOPHIE**

And then daughter An-Sophie is also active in the ‘busworld’, albeit with well-known Dutch manufacturer VDL. The ‘buses’ are in the family genes. Toine: “I am the happiest person in the world. This year I will turn 72, but I am still at work every morning at quarter to eight. Every morning there is someone who comes over for coffee, just to ‘socialise’. You work all day with your family, my wife is often there too, it’s a biotope in which I am super happy.”

**ELECTRICAL CHALLENGES**

AM Buses is a small family business and with Otokar it has found a strong partner. AM Buses has weathered the past covid years reasonably well. In 2022, 210 vehicles were delivered, including more than 50 new buses. In the process, AM Buses has built up a solid service network with several service points in recent years. These companies also have online connections to the Otokar parts service. “In case we do not have the required part in stock, we will source it there in a 24-hour service or have it sent directly to the customer” More than 600 Otokars are driving around on Belgian, Dutch and Luxembourg roads. Pater familias Toine Meeuwissen doesn’t seem to be unhappy about it. “These were strange and difficult years, but we coped quite well under the new leadership of Christophe and Thomas. It has taught us that a small and healthy company certainly has its place in this market if it is approached flexibly and with an open mind” Toine says. Now hopes are pinned on the electric variants, and Otokar now also has a fuel cell bus, on display at Otokar in hall 5, stand 505b. Thomas: “At Busworld Europe this year, a new range of electric school buses will be presented, which will then also become available shortly afterwards. We can then supply all models electrically, including midi buses from 7.70 metres to the 13-metre models.”
The 360-degree charging solution to electrify your fleet

At ABB E-mobility we know the importance of flexibility to bus operators, especially as they attempt to navigate rapidly evolving fleet and infrastructure requirements. The HVC360 solution is based on five key values of seamlessness, flexibility, efficiency, reliability, and sustainability. More than just a hardware, it offers smart energy management and a 97% up-time commitment with industry-leading service as well as smart software solutions. We cover every element of the transition to electric mobility.

Visit us on the ABB E-mobility stand to learn more.
Hall 7, Booth 784