



Busworld Kortrijk 2015 breaks all records

Busworld is exploring Asia and Latin America

Busworld 2015 had more visitors every day than in 2013 and has broken all existing records. Kortrijk has once again confirmed its reputation as the number-one fair for buses and coaches WORLDWIDE.

Talking about worldwide: next year Busworld International will be organising fairs in Istanbul (Turkey), Moscow (Russia), Bengaluru (India) and Beijing (China). Other fairs will be held as well, including in Medellín in Columbia, Uzbekistan or Kazakhstan and Indonesia. Didier Ramoudt, president of Busworld International, has busy times ahead of him. He has to start looking for strategic partners and begin contract negotiations in the respective countries. Ramoudt: "The world is globalising and so is the bus and coach sector. Constructors and suppliers are looking for solutions across national boundaries. Today, I see that a limited number of actors are dominating the market and are represented on a worldwide level. Everybody wants to conquer the world."

For the president of Busworld International the explanation for this evolution

is self-evident. "The population is growing. It is expected that the transport will be growing exponentially as well. This year around 525,000 buses will be constructed in the entire world; by 2018 this number will already have increased to 600,000 buses and coaches. This does not only have to do with the growing population but also with the after-sales and replacement market. A lot more vehicles will have to be replaced. This opens perspectives for the constructors."

Busworld International does not want to miss this train – or should we say bus – and is already making preparations in order to organise a fair in Indonesia, most likely in Jakarta. The same evolution is going on in the former Soviet republics. There, Busworld International wants to be active in Uzbekistan or Kazakhstan. The preparations are in full progress.

In Columbia Busworld International has already advanced a bit further. There, before the end of the year, an agreement on the organisation of a fair in Medellín will be signed. By the way, it is said that Latin America has a bright future ahead with regard to buses and coaches thanks to the large population there and



Didier Ramoudt, president of Busworld International, has busy times ahead of him.

the lack of extended train networks or alternative means of transport. The team of Busworld International is facing busy times. And it is important that you do not wait any longer to register: putting off your participation in order to save money is like stopping your watch in order to save time. You can register with Mieke Glorieux and Didier Ramoudt, www.busworld.org

Programme

- Busworld Turkey Istanbul 14-17 April 2016
- Busworld China Beijing 23-25 May 2016
- Busworld Russia Moscow 25-27 October 2016
- Busworld India Bengaluru 10-12 November 2016

Miss and Mister Busworld in the spotlight

Traditions are there to be respected. This is no different at Busworld. Each edition, a lady and a gentleman are rewarded with the title of Miss and Mister Busworld because of their efforts for and connection to Busworld. This year, Lydie Lecorre of Iveco Bus was crowned Miss Busworld. She has been taking care of the communication with the outside world for years. Mateusz Figaszewski of Solaris will be going back to Poland with the title of Mister Busworld. He is responsible for public relations as well.



Safety on the road

"Nothing is safer than a bus or a coach"

In the light of Busworld, the Belgian Institute for Safety on the Road also shared its view on the matter, backed up with statistics. In 2013, Buses and coaches only caused 1.7 percent of all the accidents on the Belgian roads. 24 accidents ended in one or more deaths.

On the basis of those statistics Karen Genoe analysed the situation on behalf of the Institute. Since 2009, the curve has taken on the shape of a downward spiral. The European figures speak for themselves and plead for the use of buses and coaches. Buses or coaches are only involved in 0.7 percent of all the accidents on the European roads. Just to

compare: cars are responsible for almost half of the accidents in Europe. "But we should not rest on our laurels when we hear that," Karen Genoe says. "There is always room for improvement. Our vehicles can be safer, which would make the number of accidents decrease even more."

There are also a number of bottlenecks that still need to be solved, such as the blind spot and the whole discussion on wearing safety belts, also for short distances. Good to know is that the fact that the driver is in good shape is the most important element is the whole traffic issue. Well-rested drivers are the best guarantee for few to zero accidents."

Until 2017

Groeneveld's Fluidmaster

The fact that good news should not always consist of big things is illustrated by the Dutch Groeneveld with its Fluidmaster, an innovative electronic fluid indicator. With the Fluidmaster, Groeneveld, famous for its Oilmaster systems, provides the operators with a new measuring system that is able to measure up to eight types of fluid, ranging from the engine oil level to Adblue. It all works very easily via a sensor that is installed on the (plastic) tank.

LED lights give information about the status: if the light is green, it means that the level of fluids is still okay, but if it is red, fluid needs to be added. Groeneveld also gives the customer the option to let the fluid filling system function manually or automatically – this can be adjusted via the wiring of the Fluidmaster.

Drinks and snacks with coins

At Busworld, Frenzel is introducing several fully automated vending machines, working with coins, chips or even cash-less. With these machines, Frenzel is focussing on the growing market of intercity bus services.

The most sophisticated device is a vending machine that combines hot drinks, soft drinks and snacks. The FOAS 160 has room for 3x7 different snacks, 28 0.50-litre bottles of water or soft drinks and a unique coffee concept that can make up to 90 cups. For its coffee concept Frenzel is cooperating with the German Cafea that makes high-quality 'strong' coffees.

These coffees are bottled in 1-litre bottles and then freeze-dried, so they have a period of use of two years. After defrost-

ing, the bottle can still be used for another two weeks. During the coffee serving process, the 'strong coffee' is diluted with water. The vending machine is completely automated and disposes of a coin exchange system for three different 'national' currencies. If necessary, the vending machine can also accept chips and it is even possible to integrate a completely 'cash-less' payment system. Next to this combi machine similar devices are available for the separate sale of soft drinks, hot drinks and snacks. Furthermore, all customary packaging formats and volumes can be added to the vending machine later on. Especially for coaches, Frenzel is promoting the use of plastic bottles instead of cans because passengers can close the bottles again after having taken a sip.

Clearance of the stands

As from 7 p.m. the stands may be cleared of things that can be carried away manually. The exhibitors need to make sure that the stand space used by them is completely clean and cleared up and free of any marks of tape, paint, residues, chewing gum, oil stains or other dirt after the fair. All the trash needs to be disposed of by the exhibitors themselves after the exhibition.

The certificates which give right to a reimbursement of the deposit (art. 16 of the General Terms and Conditions) will

only be delivered to your fair booth by the responsible hall persons after you have registered yourself at the fair secretariat and only **after your booth has been fully cleared.**

Disposable stands for single use, walls or other goods may not be dumped in the containers. The exhibitors need to take all those things with them. After payment of all the outstanding invoices Busworld will send you a credit note so we can give you back the deposit that you paid. All exhibitors are requested to send us their bank details via fax or e-mail.



Join us on Twitter and Facebook!

Receive the latest news in the run-up to the trade fair and while it's going on.

All you have to do is register on our website www.busworld.org

All is not lost that is delayed

During the opening ceremony Wim van der Leegte (president-manager and owner of the VDL Group) was not able to accept the prize for Bus Builder of the Year in person. Luckily, all is not lost that is delayed. Yesterday, Mieke Glorieux (Managing Director of Busworld), in the presence of Rémi Henkemans (Managing Director VDL Bus & Coach), handed the prize to Wim van der Leegte: a work of art by Peter Bergman. Eindhoven will be shining even more.



"Go electric!"

Experts Alex Stewart (Element Energy) and Carlos Navas (Fuel Cells and Hydrogen Joint Undertaking) talked to a select group of people from the bus sector about new technologies and the trends of the future. The core message? Already anticipating on what's coming, that's task number one. After all, innovation is going fast. Super-fast to be exact. "They have already understood this in China."

Alex Stewart represents Element Energy, a kind of research company located in London that does analyses but also offers consulting services. "Nowadays the supply sources for the busses are practically endless," Stewart says. "In London we decided to map out the situation and we saw that the buses that drive around according to the Euro III or Euro VI standard significantly score better regarding the emission of NOx. Nevertheless, we can still improve and we should raise the bar. Why not zero emissions, for example? This would mean a total reduction of CO2, i.e. less consumption and less noise. To us, it is an obvious choice.

In any case, the bus operators will have to adapt their purchases to the needs of the market. Each line is different. If you ask me: electric buses are the way to go. In this respect, Europe still has a lot of room for improvement, even though some interesting initiatives are popping up here and there. In China however, everybody is already totally into it. In 2014, no less than 27,000 electric buses were taken into use. Now and in the upcoming years, there will be 25,000 more. It is expected that by 2025 no less than 100,000 electric buses will be driving around in China."

Co-financing!

Carlos Navas spoke on behalf of the FCH JU (Fuel Cells and Hydrogen Joint Undertaking), an agency located in Brussels, collecting and distributing funds, amongst others in cooperation with the European Union. Navas started off with a sobering reality: 72 percent of the European citizens think that the governments are not doing enough to

improve the air quality in the cities. "In fact, there is only one solution if you take the issue seriously: Go electric," said Carlos Navas. "It leads to profit on all levels: performance, cost price, environment, passenger comfort. Today there electric buses with an autonomy of 300 kilometres are already available on the market. Just so it's clear to everybody: after 2020 the electric buses will fiercely be taking over Europe.

Those who have questions regarding the financial side of things (electric buses are still a lot more expensive than other buses) are always welcome to visit our office in Brussels. FCH JU focuses on co-financing models, including drawing up the budget. All bus operators, big and small, are welcome. What is noticeable too is that the price for electric vehicles is quickly dropping and that there is also the total cost ownership (TCO) to take into account – which happens to be great for electric vehicles."

There was a question whether a major breakthrough of electrically driven vehicles should also be expected for the



Experts Alex Stewart (Element Energy) and Carlos Navas (Fuel Cells and Hydrogen Joint Undertaking) talked about the new technologies.

world of coaches. "Hot topic," Carlos Nava answered. "Let's put it like this: this breakthrough is only a matter of time. And it could happen much faster than we all think."

More information:

- www.fch.europa.eu
- FCH JU, Avenue de la Toison d'or 56-60, 1060 Brussels



busworld
academy

KNOWLEDGE PLATFORM
FOR THE WORLDWIDE
BUS & COACH SECTOR

Busworld Academy evaluates ARTS projects

Still not a legal framework for self-driving buses

Automated Road Transport Systems (ARTS), whereby vehicles transport passengers without a driver, are only a small piece of the entire mobility puzzle. Trial projects in the Italian city of Oristano, the French La Rochelle and the Dutch Wageningen have shown that passengers still prefer to have an operator on board. Furthermore, legal and traffic-technical aspects are hampering the introduction of suchlike ARTS lines.

With the support of the European Commission and as part of Citymobil2, several trial projects were launched in 2014 and 2015 in order to investigate automated road transport. In La Rochelle (France), Oristano (Italy) and Wageningen (The Netherlands) a number of small-scale projects were started up whereby minibuses transport travellers on a fixed trajectory.

During a workshop of Busworld Academy the first results of these trial projects were presented. The first obstacles hampering an introduction of ARTS became immediately clear as well. The vehicle technology for ARTS is there, but that does not necessarily mean that these vehicles can be put on the road just like that. They can be used on delimited and secured trajectories though.

The key bottleneck is the lack of a legal framework for automated road transport for passengers. All the member states of the European Union apply a different legislation, making the introduction of ARTS more complicated. In Great Britain it is allowed to a limited extent, provided that there is an operator on board. In Finland, the Netherlands and Greece there are possibilities to start up fully automated road transport. In the United States and

Japan, suchlike projects can be started up practically everywhere. Although the ARTS technology was developed in Europe, we are now lagging behind because the legislation and the traffic regulations do not really leave room for suchlike initiatives.

According to Matthieu Graindorge (La Rochelle) three out of four users were positive but most of all used the ARTS because they were curious. "Only 80 people took the ARTS bus several times per week. 88% wants to have an operator on board; half of them want to have a full-time operator present, the other half would just like the operator to be there in the evening and at night."

Marieke Kassenberg (Dutch province of Gelderland) stressed that it is also important to assess the behaviour of other road users and the way in which they are like to react to the buses emotionally. Furthermore, it needs to be determined how these ARTS buses have to act in ethically difficult emergency situations, when the vehicle needs to choose between colliding with a pedestrian or crashing into a tree for example. "In that respect we also need to investigate who is liable in case of a collision in which the self-driving bus is involved. We also need to clearly and legally define what is to be expected from the 'driver' or 'operator' who is monitoring the bus from a distance," Marieke Kassenberg added. In the meantime we are looking forward to the project with self-driving buses on the grounds of Brussels Airport, something which will probably be operational by 2018. To this end, buses of 10 metres and longer will be used, driving at a maximum speed of 25 to 40 km/h in order to transport travellers to and from the airport terminals.

Every drive system has its place in the market

Striving for a protocol for e-charging systems

During a session of Busworld Academy it was said that any form of alternative drives has its place in the market. Especially for electric drives, the development of a standard protocol for charging systems was pleaded for. Only when the necessary initiatives are set up in this respect, electric vehicles can be optimally ordered and deployed by different transport companies.

"In the future, bus manufacturers should no longer promote themselves as providers of buses and coaches, but as suppliers of mobility solutions," Eduard Jobson (Volvo Bus) states. "Our sector is confronted with rapid changes regarding city mobility, high-quality service provision and quality of life in the cities. It is our job to offer a solution to all of these issues. Furthermore, we have to dare ask ourselves a number of justified questions about the usability of self-driving vehicles and high-capacity vehicles for example. And why not consider silent buses too? For these buses, we have to decide whether they will indirectly be causing more accidents or not. Regarding alternative drives we are now increasingly focussing on a future-oriented e-mobility. In this respect, we are already cooperating with Siemens and ABB." "Each of the different alternative fuels has its own place in the transport network," Peter Wouters (VDL) explained. "In city centres we strive for 100% zero emissions and to that end we are constructing full electric buses. In a suburban environment we want to deploy hybrid, low-emission vehicles. A specific example of that is the diesel hybrid Citea

SLF120 for De Lijn (Flanders) which accelerates electrically for the first 200 metres after leaving a bus stop and which can drive up to 10 km electrically in city centres before having to switch to diesel. With this concept, we were able to reduce the diesel use by 30% and the noise level at the bus stops has dropped below 70 dBA. For regional buses, we should be opting for efficient and economical low-weight buses; in the long term we can even use hydrogen buses for this." Peter Wouters ended his speech with a clear call for standardisation of the charging systems for electric buses. "We should compose an e-team and work on a standard protocol for bus companies and carriers, so vehicles can be deployed everywhere in the most optimised way."

Reliable battery determines success

Isbrand Ho (BYD) stressed that the success of electric buses is determined by the reliability and the right choice of batteries. "Batteries are our core business and we need to make sure that the lithium composition makes sense from a chemical point of view. The past years, the battery capacity increased by 10% on an annual basis thanks to extensive research. Now, our batteries are still generating 75% of their energy after 10 years. An optimal yield in all climatological circumstances is of the utmost importance."

During the meeting of Busworld Academy, Thomas Tonger (Daimler Buses) also

mentioned that Mercedes-Benz, in the framework of its Citaro e-mobility-platform, will be launching an electric e-cell and fuel cell bus before the end of this decade. Regarding alternative drives, he thinks that the action radius of the vehicles should also be taken into account. With a full diesel tank, a city bus can cover around 740 km, with the available e-cell systems this would only be 60 km. CNG and fuel cell buses could cover 350 and 530 km respectively.

For Scania's Urban Löfvenberg the solution for a commercially viable bus system is more in bio fuels such as bio ethanol, bio diesel and bio gas. "Electricity is a good solution, but we also have to ask ourselves where and how sustainable it is produced."

La Caivanese is opening its side windows

The Italian bus manufacturer La Caivanese is presenting its Zeus Top Class midibus. What is so special about this luxurious midibus of 7.6 metres long is that it can be fitted with electrically controlled tinted windows which can be pulled down by passengers and the driver. In this way one can let in fresh air into the bus or take pictures of the scenery.

