Busworld Europe was fantastic

The largest exhibition for bus and coach manufacturers and suppliers was held in Brussels from 18 to 23 October. Busworld Europe moved to the Brussels Expo centre which offered much more space for exhibitors than the traditional home in Kortrijk.

The space for exhibitors increased from the old maximum of 50,000sq m – which included temporary halls – to just under 80,000sq m. The number of exhibitors rose from 376 in Kortrijk to 611 and of that latter number 176 were new to Busworld. The exhibitors came from 37 countries and it will probably be no surprise that Turkey, Germany and China were the top three.

The number of visitors rose from 37,274 in the last event in Kortrijk to 39,796, and they came from 143 countries. That was a substantial rise from the 118 countries represented in Kortrijk in 2017 and probably reflects the fact that Brussels was much easier to reach, being a major transport hub rather than a small city in the Flemish part of Belgium.

Mieke Glorieux, Director of Busworld Europe, was delighted that the move from Kortrijk to Brussels was a great success. Kortrijk was a popular location but Busworld had grown too large for the Kortrijk Xpo and for the city itself. Hotel accommodation and parking were two major problems.

Mieke said: “We did it! It was a lot of work and a lot of sleepless nights, but we can all be very proud of the result. I want to thank all people involved in this success: my own team, the Kortrijk Xpo team who moved to Brussels with us to organise the extra services and last but not least the Brussels Expo team, who did a tremendous job in hosting us. I am, as always, very grateful for the many exhibitors who supported us and the numerous visitors that came, more than ever, from all over the world.”

Busworld will celebrate its 50th birthday when the next edition of Busworld Europe will be held again in the Brussels Expo, from 9 to 14 October 2021. Sales will open from the spring of 2020.
Rising demand for electric buses

It was very noticeable that there were hardly any diesel powered city buses in Busworld Europe. Almost all the city buses on display were electric and there were also some electric minibuses.

In round numbers, each year in Western Europe there are about 10,000 registrations of new city buses above 8.0 tonnes gross. At one time, the general consensus was that half the registrations of new city buses would be electric by 2030. It now looks likely that the date will come forward.

Climate control has come up the political agenda very rapidly. There is demand for very clean air in the whole of Western Europe, especially in cities which have high levels of traffic that is seen as one of the major causes of pollution. Politicians face a dilemma – they are being pressed to take action but the biggest cause of the problem is congestion, largely caused by high volumes of cars which happen to be owned by voters. It is a brave mayor who will introduce a congestion zone that restricts or charges for car use, but it has been done successfully in some cases.

It is much easier to introduce demands to electrify bus fleets particularly as buses use urban centres from early in the morning until late at night, and even in some cases through the night. However, as we saw in Busworld Europe, an electric bus typically costs twice as much as a diesel bus. The costs of electricity per km and of bus maintenance are normally lower than diesel fuel and maintenance costs, but the payback period is estimated to be around 10-12 years.

This means that the purchase of electric buses normally requires support from central or
local government but borrowing rates are very low and that is helpful. Sales of electric buses in practically every country, with the exception of China, have until recently been relatively low. Operators have bought small numbers of electric buses in order to gain experience of running them and of the various methods of recharging them.

We are now starting to see large orders placed for 100 or more electric buses at a time. The whole order process is different because infrastructure providers have to be brought on board at the tendering stage. If 100 buses are recharged overnight in a central depot there is an enormous load on the electricity grid.

Another major issue is the batteries. Some operators want batteries with sufficient energy to operate all day after full overnight recharging. Fortunately, there is a trend towards batteries that offer more energy for a given weight and that has been demonstrated quite dramatically by leading manufacturers like BYD.

The alternative is to use smaller batteries which need to be recharged regularly during the day. They give a significant saving in weight and space, enabling more passengers to be carried but there is the cost of establishing fast charging facilities all around a city. Again, that requires working with the suppliers of electricity.

An alternative to opportunity charging is to have a zero emission fuel cell on board to continually recharge the batteries. The price of fuel cells has come down but the bus has to be equipped with tanks to carry hydrogen. The concept was shown at Busworld Europe in a Belgian built Van Hool Exqui.City FC Design articulated bus for the French city of Pau. It won the Grand Award Bus in the Busworld Awards competition.

There is debate about the price of batteries. Some predict that the price will come down as more battery manufacturers enter the city bus market. Others say that there is no room for price reduction because of the high demand for raw materials like lithium. Fortunately, some battery suppliers are willing to offer their products at a fixed rate per km, similar to tyre mileage contracts.

It is remarkable how the electric bus market has developed so far and further progress looks set to be rapid. There is also a prospective market for electric interurban and luxury coaches, but on the latter there is a potential conflict between luggage and batteries for available under-floor space. Even so, with some cities intending to introduce zero emission zones, demand for electric coaches might gradually rise.

With so many electric buses on display in Busworld Europe it was an excellent opportunity to discuss all the issues and to prepare for an electric future.

Many Minis

Wherever you turned in Busworld Europe there seemed to be minibuses and minicoaches. They came in a wide variety of types and many were based on the popular Mercedes-Benz Sprinter.

The electric revolution has spread to the mini sector with a number on display and there were also several with low entry layouts, with the floor only one step above the ground and easy to negotiate because of the small wheels and tyres. An alternative solution was shown by Indcar with a low platform behind the rear axle, capable of taking wheelchairs or standing passengers.

Modern minibuses are much more durable than they were in the past and they could well be the answer for maintaining services in rural areas. Other applications are for demand responsive transport and for feeder services to main line bus routes.

Busworld Europe was host to vehicles converted from panel vans and also to structures built on popular chassis which retained only the driveline and front bonnet. The latter enabled bodybuilders to make wider structures with more interior space and to tailor vehicles to specific operator requirements.
Busworld Academy keeps on growing

During Busworld Europe, the Busworld Academy organised a series of seminars and conferences in collaboration with UITP, VIAS, ICB-Institute, Gent University, GNVA and the American Bus Association. The Academy welcomed 154 speakers and 1,017 participants. That is rapid growth from the first Academy programme in 2013 which attracted 40 participants.

The programme covered all the current hot topics in the bus and coach industry such as the evolution towards autonomous buses, the introduction of Mobility as a Service, ongoing digitalisation, the way towards low and zero emission bus services, the future of small and medium enterprises in the industry, improvement in road safety via adapted infrastructure and the import regulations for buses and components in the United States. The programme was organised so that delegates could visit Busworld Europe to see the latest developments in their specific areas of interest. It also gave exhibitors the opportunity to meet and talk to people of influence such as legislators and opinion formers.

DIESEL HAS A FUTURE

Although some politicians and opinion formers are speaking out strongly against any vehicle which uses diesel fuel and are proposing zero emission zones in urban centres, diesel has to be defended because it will be a necessary fuel for many years to come.

Diesel fuel is now much cleaner with very low sulphur content. The latest Euro VI emission limits are very strict and engines have to maintain those limits for at least 750,000km. Euro V engines can be brought up to Euro VI standards at relatively low cost, enhancing the residual value of the bus or coach.

Compressed natural gas is specified as an option by some bus manufacturers. On the plus side, emissions are even cleaner than diesel but on the minus side there is the additional weight of the tanks that have to be mounted at roof level.

Electric city buses will become the standard but diesel will be the dominant fuel in coaches for many years to come. However, the rise of electric traction is a challenge and a threat to diesel engine manufacturers. One of the most fascinating exhibits in Busworld Europe was on the stand of Cummins which is now a global manufacturer of diesel and gas engines. They showed a skeletal bus with their Next Generation Battery Electric System with its new low profile battery, so they now have a foot in all three camps.
The winners of the busworld awards

Immediately prior to Busworld Europe, a jury of highly experienced industry experts judged a number of vehicles and products that had been entered into the Busworld Awards competition.

The Grand Award Bus was given to the Van Hool Exqui.City FC Design for Pau, France. The hydrogen fuel cell bus not only offered zero emissions but also fast refuelling and similar operating range to a diesel bus. The jury praised the safety features, the completely separate driver’s compartment with centrally located controls. It offered excellent visibility and had several cameras covering the entire external area of the vehicle. The judges also gave this vehicle the Ecology Label Bus.

The Grand Award Coach was given to the Volvo 9900. It scored well on design, maintenance, comfort, driving quality and acceleration. The judges were impressed by the active and passive safety, such as the energy absorption zone under the driver and courier positions, the automatic fire extinguishing system, the on-board computer and black box system and passenger safety such as lighting at the entrances. The 9900 is unusual in having a floor that rises gradually from front to rear, like a theatre, giving good visibility for all passengers. The jury also gave the 9900 the Coach Safety Label.

The Mercedes-Benz eCitaro won the Comfort Label Bus Award. MAN took the Safety Label Bus Award with its Lion’s City Hybrid and Yutong was given the Design Label Bus Award with its U12 model.

The Van Hool EX11H and the Setra TopClass S 531 DT each won a Comfort Label Coach Award while Yutong won both the Design Label Coach Award with its impressive T13 model and the Ecology Label Coach Award with its ICe12 electric coach. In recent years, Yutong has invested very heavily in research and development, and also in its production facilities and its three Awards against stiff competition confirm the progress that the largest Chinese manufacturer has made.

Busworld also offered Innovation Labels for products. The initial 66 applicants were whittled down to a shortlist of 27. Out of those, 9 products were awarded for Innovation Labels. They were Akasol with the AKASystem AKM CYC ultra high energy module: DAFO Vehicle Fire Protection with the Lilon Fire: GEA Bock GmbH with the GEA Bock HR40Star CO² compressor: MEKRA Lang with its Digital Vision System: Stoneridge/Orlaco with MirrorEye: Volvo Bus Corporation with the Volvo Electric Driveline: and ZF Friedrichshafen AG with CeTrax.

All these Busworld Awards Labels were proudly displayed by the winners on their vehicles and products during Busworld Europe.
EBUSCO EXPANSION

One of the highlights of Busworld Europe was the launch by Ebusco, a company based in the Netherlands, of its brand new 3.0 model, its latest development in full size electric city buses. The vehicle won the Innovation Label Bus Award in the Busworld competition, having impressed the judges.

Ebusco started business only seven years ago, working with Chinese partners, and progressively introducing European standards of engineering and development to improve driver and passenger comfort and safety, and to extend the daily range. Expertise was recruited from the aerospace, automotive and electronics industries. The current 2.2 model has a range of 450km on a full charge.

The new 3.0 has a large composite content which has helped it to achieve a weight reduction of 33%! The unladen weight quoted on the bus was 8,530kg which compares well with standard diesel buses. The 3.0 will have a range of up to 500km on a full charge, which is more than enough for a long day of service.

Ebusco has steadily increased the European content in its buses and plans to open a production facility in Deurne in the Netherlands in the middle of next year. This has been spurred by the intention of the Dutch Government that all buses should be zero emission by 2030.

As part of this target, shortly after Busworld, Ebusco announced receipt of an order for 156 electric buses from Transdev Netherlands valued at 130mn euro. The mixture of low entry and low floor buses will enter service in Haarlem and around Amsterdam Schiphol airport.

Next up
BUSWORLD TURKEY

Busworld Turkey will be held in the Istanbul Expo Center from 05-07 March 2020. This will be the eighth edition and the largest exhibition for the Turkish industry which is one of the strongest in the world.

Turkey is a major manufacturing centre for Daimler Buses, MAN and Neoplan. There are also strong Turkish builders, making a wide range from minibuses to articulated city buses and luxury coaches and they have all developed export markets.

The manufacturers are backed by a component industry that can supply all their needs and also increasingly sells to manufacturers in other countries.

The Expo Center is directly connected to the middle of Istanbul by metro and is close to some excellent hotels. Busworld and our Turkish partners hope to see you in Istanbul in March next year.