

TECH *talk*

Your guide to the latest transport technology



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WRIGHTBUS CONFIRMS FOR SPRING SHOW

Northern Ireland bus builder, now Bamford-owned, reaffirms commitment to ITTHub

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BATTERY DENSITY TO DOUBLE, SAYS GERMAN INNOVATOR

Third-generation lithium cells due in 2021 will offer twice the range, says AKASOL

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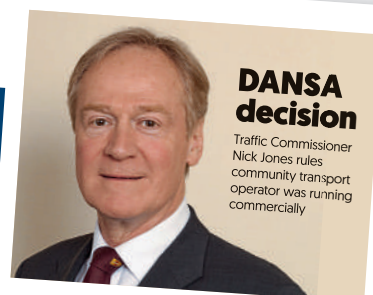
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Keeping up with the march of electric buses



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Camira celebrates supplying London



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A Bus and Coach Buyer supplement

Bus&Coach
The Original Weekly for Business on the Move **Buyer**

Technology is crossing over

When the idea of a spring exhibition was first mooted to me by organiser Mark Griffin, it took a few days to take root.

A coach and bus event in spring? But the more I thought about the idea, the more I could see the vision Mark had for ITT Hub and, just as importantly, for the Farnborough International Exhibition & Conference Centre. Just looking at the NEC makes my legs ache...

Mark has been around this industry for a very long time, and over the years has witnessed the introduction of huge rafts of technology – on-vehicle systems which have made vehicles safer, software that has made planning much easier, and latterly an irresistible move towards low-carbon, low-emission vehicles.

He's also shrewdly spotted that the heavy vehicle market – whether trucks, coaches or buses – is almost always the first to be the test bed for organic change and the whipping boy, some would say, for the drive for cleaner city air. Importantly, he also saw that whether the vehicle is carrying people or parcels, the technology is very often shared.

Now, I know that some among you will cock an eyebrow at the idea of visiting a show which isn't solely focused on PCVs. What relevance, you might say, has the truck market to the business I am in? As it turns out, a great deal, not least of which is having the same regulatory system, with all its growing number of checks and balances.

The fact is, when suppliers begin looking at the commercial vehicle sector, they almost always start by targeting the truck market, simply because of its immense size. What they are selling is very often as relevant to passenger vehicles. Increasingly, the heavy vehicle fleet markets are connected – in every sense.

So we see a great future for ITT Hub, and so do the many exhibitors who have hopped aboard the inaugural event – an event that's sure to grow as exhibitors and visitors begin to see the advantages of looking round the corner at what the truck boys are doing – whether it's fleet finance, telematics, staff management, workshop equipment or the plethora of products we share.

In this issue of Tech Talk, we bring you more news of ITT Hub together with the latest news of technology. Have a browse, and pencil in 13 and 14 May for a visit to Farnborough.

Mark Williams

Group Editor, Bus & Coach Buyer



ZF is 'electr

ZF Services UK has become 'service ready' on the next generation of commercial vehicles, including ZF electric axles.

The company's UK Centre of Competence in Nottingham – which provides technical support, repairs and servicing – has put technicians through extensive high voltage training and invested in the very latest testing equipment for TraXon fully automatic transmissions and AxTrax AVE electric axles.

ZF Services UK's expanding Service Partner network is also undergoing training as the company meets the evolving demand for the repair and maintenance of modern vehicles.

ZF's Nottingham Centre of Competence – which has enhanced its capacity to remanufacture and repair transmissions and axles – can perform

CONTINENTAL LAUNCHES SMART TACHO DOWNLOADER

Continental is launching the latest smart tachograph downloading tool, the VDO Smart Terminal.

The new product adds to VDO's existing range of downloading tools that integrate with the VDO TIS-Web downloading analysis and archiving software. It is designed to offer secure data downloading in an easy to use format and is compatible with the new second generation driver cards. Needless to say, it meets the legislative requirements for downloading of tachograph and driver card data. It features a seven-inch touchscreen display and can be wall or table mounted.

The VDO Smart Terminal provides basic analysis of data downloads (including driver and vehicle information). Software updates can be made locally via the internet to save time and additional costs. It has a 32 GB internal memory and RFID Chip Reader.

For more information contact uk@vdo.com
🌐 www.vdo.com/commercial-vehicles/



'Electric ready' in Nottingham



on-site diagnosis, repairs and servicing to ensure vehicle downtime is minimised.

With ZF AxTrax AVE electric portal axles successfully lowering emissions for hybrid buses and trolleybuses, and TraXon providing effective transmission of power and long service life, ZF Services UK is fully equipped to meet the repair and maintenance challenges of the next generation aftermarket.

David Wakeling, ZF Head of Commercial Vehicle, said: "ZF Services UK has invested in additional resources, training and equipment at its Nottingham Centre of Competence to ensure it is ideally placed to service and repair the next generation of vehicles. This investment demonstrates our commitment to customers and ability to support their ongoing commercial vehicle service and maintenance needs."

Fully ISO accredited, the ZF Services UK Centre of Competence in Nottingham is a dedicated facility and thanks to the recent expansion, now boasts a 6500m²

workshop area to further underline the company's position as a leading industry specialist. With multi-brand capabilities, the centre uses only industry trained technicians who are multi-skilled and work to OEM standards.

The ZF Nottingham head office also stocks and distributes genuine ZF parts, as well as provides a non-ZF gearbox remanufacture and reverse engineering service.



YUASA BUILDING LI-ION BATTERIES IN HUNGARY



Yuasa, the world's leading battery manufacturer, has announced that automotive lithium-ion battery manufacturing operations have begun at its new battery plant in Miskolc, Hungary.

GS Yuasa Hungary now manufactures automotive 12V lithium-ion batteries at the plant and will begin to supply them to European customers.

Incorporated as a GS Yuasa subsidiary in October 2017, the 60,000m² plant is the first lithium-ion plant outside of Japan for the global battery manufacturer. It is installed with the latest GS Yuasa Group automated manufacturing technology in order to fulfil the increasing market demand in Europe.

The automotive 12V lithium-ion batteries will be used for automotive Starting, Lighting and Ignition (SLI) applications. They are currently assembled with lithium-ion cells produced in Japan, but GS Yuasa Hungary plans to manufacture these cells on site in the future.

A maximum production capacity of 500,000 units per year is expected to be reached during the first phase of operations, with capacity set to significantly expand in the coming year.

🌐 www.gs-yuasa.eu

Wrightbus reaffirms commitment to UK market

Wrightbus is to make its public debut under its new ownership, the firm has confirmed.

It has reaffirmed its commitment to the UK market, by continuing with plans made under Wrightbus' former owners to exhibit at ITT Hub, Farnborough, Hants on May 13-14.

It means it will be the first time that Wrightbus has exhibited since being bought out of administration by Jo Bamford in October 2019.

"We are delighted to confirm that Wrightbus, under the new ownership of the Bamford Bus Company, will be exhibiting at ITT Hub in May this year," says John McLeister Managing Director, Sales and Business Development, Wrightbus.

"This new and exciting event, with our focus firmly on our customers and innovation and technology, is an ideal platform for us to re-establish our presence in market."

Wrightbus' large outdoor stand is located in a prime position, adjacent to the bus, coach and van demonstration hub.

The new show – dedicated to innovation and technology in transport (ITT Hub) fills a significant gap in the marketplace – sees an indoor and outdoor exhibition, alongside ride-and-drive opportunities on a dedicated two-miles route.

There is also a high-level free-to-attend conference, which will be opened by a keynote address from UK astronaut Major Tim Peake CMG.

Back in business: (L to R) Buta Atwal, Chief Executive at Wrightbus; Jo Bamford, Executive Chairman at Wrightbus; Jon Harman, Head of Fleet at First Group UK Bus and John McLeister, Sales and Business Development Director at Wrightbus, as the first buses in new ownership take to the road



Fly down to Farnborough

An innovative approach, with ride-and-drive opportunities, will put minibuses, coaches and buses centre-stage at a new event, which takes place just 17 weeks from now



ITT Hub has lined up impressive partnership organisations: (L to R) Leon Daniels OBE (Binswood Media), James Courtenay-Evans (Lloyds Banking Group), Stuart Fowler (Centrica), Graeme Cooper (National Grid Electricity Transmission), Chris Chandler (Lex Autolease), Emily Highmore-Talbot (Centrica) and Mark Griffin (Binswood Media)

Shaping up to be the biggest event in its sector – and ringing in a fresh approach this spring – an exciting new free-to-attend event covering innovation and technology in road transport, with a co-located two-day high level conference opens just outside London.

The exhibition and conference – Innovation and Technology in Transport (ITT Hub 2020) – is being staged at the impressive, purpose-built venue at Farnborough, Hampshire, just off the M3.

Operators are being urged to put the 13 – 14 May event in their diaries now to make sure they don't miss out on what's planned

to be a modern and exciting event for coach and bus.

With an indoor exhibition, co-located high-level two-day conference and external display areas, visitors will be able to experience a range of 'ride-and-drive' vehicles on site and adjoining two-mile demonstration route.

Being staged at Farnborough International Exhibition & Conference Centre, it's a truly world-class venue that's just over 30 minutes by train from London, or with easy road access to a large free car park at the venue.

For those coming by train, a shuttle service exclusively using a fleet of brand

WHO'S THERE?

There's a growing line-up of major bus and coach vehicle suppliers already signed up for ITT Hub.

- Arrival
- BYD
- Caetano
- Dawsongroup
- Iveco
- Mercedes-Benz
- Mistral Group
- Pelican Yutong
- Volvo
- Wrightbus

SUPPLIERS INCLUDE

- Bridgestone
- Brigade Electronics
- CheckPro
- Continental
- DWF Law
- FleetCheck
- HJS Emission Technology
- Licence Bureau
- Low Carbon Vehicle Partnership
- Lytx, Mobile Onboard
- Omnibus, Passenger
- Portland
- r2c Online
- Smart Drive
- TachoSys
- TotalKare
- Traffilog
- TruTac
- Webasto

new Yutong electric buses will operate direct to the venue and Yutong's UK dealership – Castleford-based Pelican - will also be exhibiting.

Among the many events Farnborough hosts each year – including the International Airshow – the £30m new purpose-built conferencing suite and exhibition halls has been announced as the exciting home of the reborn British Motor Show in August, and clean energy tech and vehicle festival, Fully Charged Live in early May.

Full details of all exhibitors are at www.itthub.co.uk/floorplan

● Visitor registrations now open at www.itthub.co.uk



SAVE THE DATE – PLAN FOR ITT HUB 2020



With 70 exhibitors already confirmed, ITT Hub 2020 will bring together all the latest thinking and technological developments which are already reshaping the transport landscape.

Visitor registration for the free-to-attend, two-day exhibition and conference – on 13 and 14 May – has now opened.

Interest in the rapid pace of passenger vehicle development has never been higher and ITTHub 2020 will be a unique event, unlike any other in the transport sector.

Says organiser of the ITTHub event Griffin (shown right): “We been blown away by the massive positivity from the sector for the event.

“The innovations in vehicles and technology now coming to the market mean that operators have sharp tools in the box to enable them to improve customer service and generate even more operating efficiencies.

“ITT Hub 2020 is all about delivering a unique, modern and lively event that brings real benefit for operators and other visitors.”



Key information

- Where: Farnborough International Exhibition & Conference Centre, ETPS Road, Farnborough GU14 6FW
- When: Wednesday 13 May 0930 –1700, followed by free networking drinks reception until 1900. Thursday 14 May 0930-1700
- How to get there: Free electric bus shuttles from Farnborough Main railway station, or use free parking on site directly adjacent

to the exhibition halls

- Hotels: There are 850 rooms within one mile, and 2,000 rooms within five miles. Visit the website for details
- Event size: 20,000m2 indoor, 25,000m2 outdoor, plus two-mile ride-and-drive, plus conference

Full details and visitor registration:
🌐 www.itthub.co.uk


FARNBOROUGH
INTERNATIONAL
EXHIBITION & CONFERENCE CENTRE

Networking reception allows ‘chill and chat’

An innovative free networking evening drinks reception is an innovative feature of the new ITT Hub 2020 exhibition and conference at Farnborough International Exhibition & Conference Centre on 13-14 May.

Free to attend, the reception is held on the first day and starts at 1700, allowing a full two hours for visitors, conference speakers and exhibitors to mingle and network.

Says Mark Griffin, CEO of event organiser Binswood Media:

“We’ve got a fantastic large space on the first floor of the conference centre, which is light and airy with views over the whole of the outdoor area.

“It’s an excellent opportunity for attendees to relax and network after the event, without having to rush off.

“There’s no speeches, awards or grand dinner – just a traditional get-together that we know our industry really appreciates and enjoys.”



Conference tackles coach and bus issues



the choices you make about fuels and vehicles. Where should you invest and who are the innovators in this space?

Future Business Strategies: How might transport businesses need to change to adapt to future requirements? What new business models will be needed? How will they manage change, resilience and risk? And how can the government help the private sector deliver?

Future Communities: Cities seem to be the main focus for future innovation and policy agendas. How should cities manage congestion, pollution, and safety in stressed and dense environments? But, very importantly, how can our towns, villages and the countryside not be left behind?

A major conference, it uses four separate rooms – all in Farnborough's light and airy first floor conferencing suite – allowing attendees to choose the presentations most relevant to them.

The first day finishes with a free networking drinks reception for all attendees from 5pm to 7pm.

Speaker details are currently being confirmed, but they already include former TfL MD Surface Transport Leon Daniels, Lucketts Travel Director Ian Lockett and Andy Eastlake, MD – LowCVP, among many others. The website is updated in real time. Of key interest to coach and bus sector attendees are the following presentations:



A two-day, high-level conference is to tackle the key issues facing the coach and bus sector in 2020.

Staged at Farnborough International Exhibition & Conference Centre, just outside London, on 13 and 14 May, the free-to-attend conference is co-located with the ITT Hub 2020 show, focussing on Innovation & Technology in Transport.

The conference opens with an in-depth keynote address by pioneering British astronaut Tim Peake CMG. As well as taking questions, his address will kick-off two days of debate and discussions at the conference.

The conference – which includes a large coach and bus element, alongside truck and van – explores the four big themes facing road transport: Future Data, Future Business, Future Vehicles and Future Communities, during 60 sessions with over 150 speakers.

Aligned with government strategies the four themes cover:

Future Data: Data is the exciting engine room for the future. This stream examines the biggest drivers, what's happening in technology and how it impacts transport

Future Vehicles: Making sense of the future transport and how it might impact

1000-1100

Keynote Speaker – Tim Peake

Tim Peake, 47, was the first British astronaut to visit the International Space Station, where his work during Mission Principia inspired millions about the possibilities that space could offer. A former test pilot, he is also a STEM [science, technology, engineering, maths] ambassador, schools' speaker and best-selling author.



1115-1200

Future fuels, what do you need to know and think about

There are many more options for new vehicles being developed, particularly around alternative fuels. This practical session will look at what you need to factor into your decision making before you procure the next set of vehicles that is right for your operation.

1130-1215

What do we mean by data in the freight, passenger and energy sectors?

We all know that data is changing the way we live, work and manage our businesses, but what role does data play in the freight, passenger and energy sectors? In our first 'Future Data' session, our panellists will share their expertise spanning a range of sectors and set the tone for the rest of the conference.

1220-1305

What's the reality of autonomous vehicles and what's the business model?

If autonomous vehicles are to be adopted in the commercial sector, they need a business case. Costs need to be lower than conventional vehicles, they need to be safe, they need to be reliable, fit into a complex supply chain and be liked by customers and consumers. We regularly hear that autonomous vehicles are just a few years away, but what's the reality and what business transformations will they really bring about?

1235-1320

Futuregazing: what strategies do we need to achieve Net Zero?

This session looks further ahead to the future and is designed to challenge many of the assumptions of your business and our industry. If we looked more honestly at our collective desire to achieve Net Zero, what do we really need to do to achieve it, and how uncomfortable would it be?



1250-1335

Dealing with the complexity of multiple emissions zones

Increasingly urban centres across the UK are looking at, and now implementing, different restrictions on commercial and public service vehicles' entry. Transport operators will share their strategies on optimising their fleet in an environment which is moving, complex and hugely challenging.

1430-1515

What does the future look like for bus and coach?

Each electric bus can prevent up to 60 tonnes of carbon emissions per year as well as having lower maintenance costs than a diesel engine. This means that more companies and cities are moving from diesel to electric. In this session, we'll hear a real-life examples of how electric vehicles can improve PCV operations.

1500-1545

What infrastructure is required for the future?

Changes to demography, to technology, to how we organise our lives and business activities, all impact on the type of infrastructure we will need in the future. Our panel will discuss our future infrastructure needs and what new finance models, engineering and technologies will make these investments possible.



1525-1610

What will mass-market adoption of electric vehicles mean for the grid?

The development and adoption of electric vehicles will place new demands on infrastructure, which has raised questions about whether it can cope. In this session we will hear from those responsible for installing, operating and maintaining rapid charge points and get their thoughts on key questions, including: how can our cycle of charging batteries become more dynamic; what information will users need to know; what are the best times to charge; and what will it cost?

Thursday 14 May

0930-1015

Futuregazing: what could data do?

This session looks further ahead to the future and is designed to challenge many of the assumptions of your business and our industry. If we looked afresh at our needs and business operations, what could data really help us achieve?

1000-1045

Which business models will succeed in the future for passenger transport?

What business models will be essential to the passenger transport of the future? Will traditional areas remain key or will Transport companies need to redesign their strategies and innovate to survive?



1015-1100

Creating a vibrant future for our rural communities – here's the plan.

Rural communities are often forgotten when we talk about future, with so many new transport concepts focussed around cities where population density makes business cases easy. For the future success of our country, we need to think differently about how to deploy technology and build operating models which deliver for all people and communities. Our experts will share their approaches to achieving connected, thriving, modern rural communities.

1035-1120

Data investment: is your data really valuable?

We are told that the data we hold is valuable. But is it? This session examines the value of your data and how to get the most out of it.

1050-1135

Being confident that we have an ethical supply chain for electric and gas vehicles

The supply chain for transport must not only be effective for businesses, but also of the highest reputational and ethical standards. This session seeks confirmation that sufficient electricity, gas, battery and other power sources can be produced in a way that is sustainable and ethical.

1105-1150

Successful collaboration

Delivering net-zero will require more collaboration across digital, energy and transport sectors to find new ways of operating and doing business. To help you find your way to the future, we will showcase successful case studies of collaboration, highlighting approaches, benefits and how challenges are overcome.

1155-1240

Futuregazing: what could vehicles be?

This session looks further ahead to the future and is designed to challenge many of the assumptions of your business and our industry. If we looked afresh at our needs and business operations, what do we really need our vehicles to be?

1210-1255

How to fund the future: strategies for finance, investment, risks and opportunities

What funding is required to fund an environmentally-friendly future full of technological innovations? What financial paths are available to meet the investing needs of your businesses and to maximise your return?

1225-1310

Can Clean Air Targets be achieved by using carrots rather than sticks?

The current approach to reaching air quality targets or improving air quality in local areas is centred around bans, charges and restrictions. But is there a quicker and less economically impactful way to incentivise travel and transport by cleaner methods?

1315-1400

Attracting, developing and retaining talent in the passenger transport sector

Attracting and retaining talent is essential for the current and future success of all logistics companies. How can you develop the right strategies to attract and keep the best, and compete not just against other companies, but against other industries?

1330-1415

Aligning Central/Regional/Local government policies/strategies – do we have solutions?

Devolution has brought many benefits, but the coordination of the different governments and administrations – local, regional and national – has made planning, investment and policy making more challenging. Our experts, from all areas of the United Kingdom, will share their approaches to joining up strategies, plans and investments across bodies with different responsibilities so that communities' transport needs are met and so they can thrive.

1350-1435

What else can technology do for passengers, payments and journeys?

Technology already helps us to plan our journeys and make quicker payments. This session examines how the industry can keep up with the tech-savvy customers' ever-increasing needs, and leverage technology to improve the customer experience and the bottom line.

1405-1450

Which alternative fuel is the one to back?

From natural gas to electricity, the range of alternative fuels available for the sector is quite broad. Which ones should we prioritise in terms of efficiency, costs and environmental benefits? Does there need to be one winner, or is the future full of multiple options?

1420-1505

Public sector support: what help does industry need from government?

Innovation and the introduction of new technologies is critical to road transport's ability to deliver a net zero future. But this can only be done with confidence if there is strong collaboration between the government and the industry. This seminar provides an opportunity to discuss what policy and other interventions by government industry requires to deliver on the challenges ahead.

1500-1545

Can passenger transport really get to zero?

How can zero-emissions be achieved in the transport of passengers? And can this be achieved efficiently and economically? What incentives and infrastructure are needed? Our experts will set out their proposals.

1515-1615

The cities of the future: bringing the vision to life

Our cities are the centre of social and economic activity. Governments at local, national and international levels are tasked with designing strategies that balance social and economic activity with the sustainability of their cities. What investments do we need to prioritise and what are the best ways to achieve this?

The full conference programme is here: <https://tinyurl.com/yjfete2g>

'Agnostic' SmartWitness can dovetail into your systems

SmartWitness has developed Smart API, a cloud-based platform that delivers video data to existing fleet management software, allowing operators to integrate CCTV without changing systems.

SmartWitness 3G/4G camera products connect directly to Smart API on power-up, then Smart API securely receives, parses, and hosts the video and driving data. This data is then securely delivered to the telematics web server for viewing real-time video, images and GPS location.

The benefits are improved safety record for fleets and better first notification of loss for insurers. According to SmartWitness, globally, operators report a 17% reduction in claims costs and 27% reduction in claims frequency, 98% of disputed claims resolved in favour of the operator and potentially recovery of the capital cost in the first year.

SmartAPI offers a REST API and real-time webhooks which allow telematics service providers to quickly and easily add the SmartWitness solution hardware to their telematics offering. SmartWitness offers everything from a simple forward-facing camera to an eight-channel DVR. Fleets can choose the appropriate amount of camera coverage needed for their vehicles and Smart API will ensure secure storage and delivery. SmartWitness driver-state monitoring (DSM) add-on provides the ability to detect fatigue, mobile phone use and other distracted driving behaviours.

Smart Witness has added detailed driver reports into the system which provide easy to read league tables. Connected live video telematics provides contextual analysis of driver behaviour, which it believes provides the most accurate picture of driver safety. For example, a driver could have taken evasive action to avoid a small child running into the road, but a traditional telematics system will merely see that as a harsh acceleration or braking incident. The SmartWitness system will be able to exclude this incident from the report.

Driver distraction units have also been added to the product offering, which detects whether the driver is paying enough attention to the road by using the latest AI technology.

A spokesperson for the company said telematics started with simple GPS location-based interfaces. However, data generated by this can be overwhelming and often is not utilised to its fullest potential. The spokesperson said: "There are a lot of great advancements happening in machine learning and AI which will help to provide more value from this data and reduce the overwhelming feeling fleet managers have currently. Video telematics is already doing this by opening a real window into these data sets, which go a long way to helping visualise the data into something that is really comprehensible."

www.smartwitness.com/uk



HAND-HELD CO ANALYSER LAUNCHED

Bacharach has introduced a hand-held exhaust gas analyser for measuring carbon monoxide – the Monoxor XR.

The Monoxor XR is helpful in verifying worker safety if working alongside running vehicles but can also be used for engine tuning and diagnostics, resulting in improved equipment efficiency and fuel savings. The Monoxor XR provides visual and audible alarming for instant alerting of personnel to dangerous CO levels.

The expanded measuring range of 80,000 ppm allows technicians to test even the most poorly-maintained equipment without risking damage to the gas sensor. Bacharach's Combustion mobile app allows the user to quickly and easily create and send customisable emissions reports from their smartphones or tablets.

A specialised exhaust probe kit is available for direct connection to various exhaust pipe designs, and a magnetic rubber boot is available to provide a non-slip, secure grip for hands-free testing.

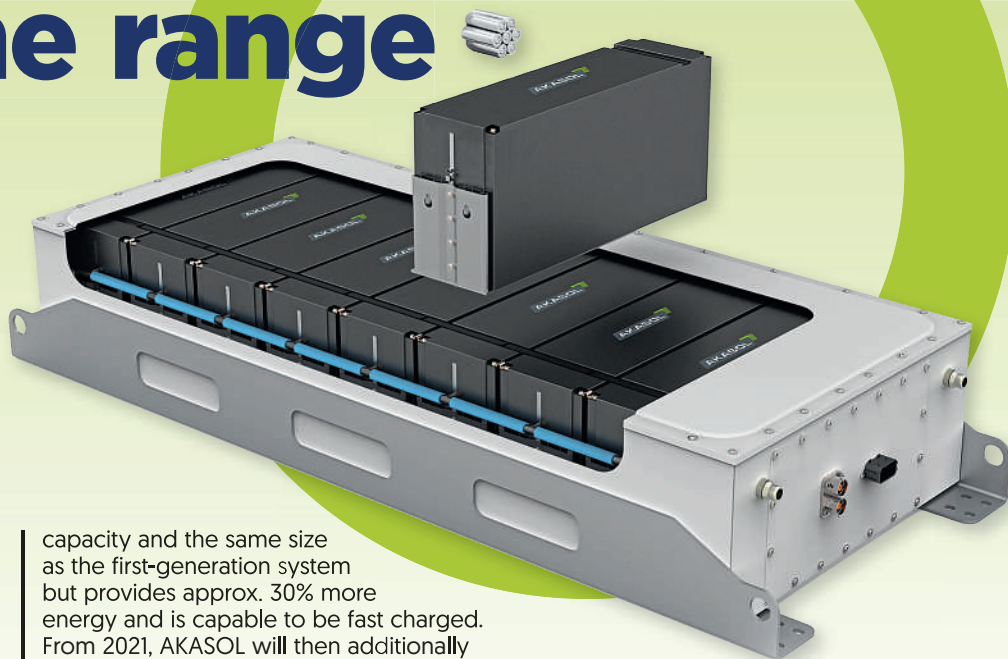
The Monoxor XR employs Bacharach's B-SMART sensor technology for pre-calibrated sensor replacement in the field – minimising downtime, maintenance costs, and overall cost of ownership.

Bacharach equipment is distributed in the UK by suppliers including Climalife UK and Cole-Palmer.

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CALL BUS & COACH BUYER ON 01733 363476

Gen 3 batteries promise twice the range

AKASOL announces huge order, with technical advances due in 2021 to double the energy density of the current battery range, making a 700km charge possible



German manufacturer of high-performance lithium-ion battery systems, AKASOL, has received a large follow-up order from one of the world's leading commercial vehicle manufacturers with a total volume in the three-digit million-Euro range.

From 2021 until the end of 2027 the company will supply the third generation of high-energy battery systems for various electric vehicles of the global customer – which it's keeping to itself for now – and safeguards AKASOL's dynamic growth in the coming years.

"We are proud of the confidence that our long-term customer has once again placed in us to expand our highly successful cooperation and that AKASOL remains supplier for a strategically important e-mobility component for various electric vehicles manufactured by this global player," said Sven Schulz, CEO of AKASOL AG.

AKASOL already supplies the first generation of the high-performance lithium-ion battery system AKASystem OEM PRC with a storage capacity of 50 kWh to several business units of the customer. It will be followed in 2020 by the second-generation of the AKASystem OEM PRC system with 66 kWh of storage

capacity and the same size as the first-generation system but provides approx. 30% more energy and is capable to be fast charged. From 2021, AKASOL will then additionally deliver the third generation of battery systems with very high energy density mainly focusing on range applications.

The so-called AKASystem AKM CYC has the same geometrical dimension as the two previous generations but with an increased storage capacity of approx. 100 kWh per pack, thus providing twice as much energy compared to the battery systems of the first generation. The increased storage capacity is achieved by AKASOL's newly developed cylindrical cell module type AKAModule CYC.

Depending on the installed storage capacity, the new battery system technology enables ranges for electric buses or trucks of up to 700 km in real operation and thus meets almost all electrical range requirements of the commercial vehicle industry. Additionally, the third generation also remains capable of fast-charging and can be charged at up to 500kW. The battery systems will be produced at the new headquarters in Darmstadt starting in 2021, and in new AKASOL US-Facility in Detroit, Michigan starting in 2022.

Carsten Bovenschen, CFO of AKASOL AG, said: "The volume of this new contract increases the total order backlog to approx. EUR 2 billion by 2027. That supports AKASOL's long-term expansion plans as well as advanced investments in organisation, infrastructure, and production capacity."

The first- and second-generation battery systems are produced at AKASOL's serial production site in Langen/Hesse. The second production line will already be installed at this site until the end of this year to start second-generation systems serial production by mid-2020 – six months earlier than scheduled.

The third-generation system will be produced at the new headquarters in Darmstadt. According to current plans, the new site will be ready for occupancy by mid-2020, so that serial production can be expected to start on time in the second half of 2021. In addition, the second- and third-generation battery systems will also be produced at the new site in Detroit/ Michigan, starting in 2022.

BUS AND COACH BUYER TO HOST VISITOR LOUNGE

Bus and Coach Buyer is sponsoring a dedicated 'Bus and Coach Lounge' for visitors to relax and network at ITT Hub 2020 – a two-day exhibition and conference being held at Farnborough, just outside London, 13 to 14 May.

As part of the free-to-attend event, which has a dedicated coach and bus focus, a special lounge area has been created. It's a welcoming area that you can use to arrange to network with industry colleagues without having to book.

It's also expected that a number of key industry figures will spend time based in the lounge, available to speak with operators.

"We're delighted to be hosting the Bus and Coach Lounge, right at the heart of the exhibition," said Bus and Coach Buyer's Group Editor, Mark Williams. "We will, of course, be welcoming our

readers with a coffee to kick back.

"But we would also love to meet any exhibitor or visitor interested in the coach and bus market, and share our combined expertise of more than 80 years in the business. The advice is free, and we may be able to connect you with bus and coach operators across the UK, as we reach 80% or more of this complex market."

Adds Mark Griffin, CEO of event organiser Binswood Media: "We're delighted to sponsor this special supplement and also welcome visitors to the dedicated Bus and Coach Lounge, sponsored by Bus & Coach Buyer magazine."



Driving investment in the UK bus sector

Martyn Bellis, Sales Manager, Transportation, for Siemens Financial Services in the UK explains how, in the low point of an investment cycle, flexible finance can maximise capability to future-proof bus fleets.

Public transport is developing rapidly but UK government statistics in recent years have indicated a clear decline in bus use across England.

According to the Campaign for Better Transport, a 45% reduction in funding for bus services across England and Wales since 2010 has witnessed more than 3,000 routes (3,347) being altered, reduced or totally withdrawn. This negative trend has stimulated essential discussions around the urgent need for significant investment in the sector, with bus operators calling upon the government for a clear strategy with regard to bus services.

The UK government has since demonstrated its support of the nation's bus networks, dedicating £40 million of public funding to local authorities in 2018 as part of the Clean Bus Technology Fund. The scheme provides grants of up to £500,000, with the central aim to support councils to upgrade bus technology as a means of reducing emissions in areas that suffer from poor air quality. As part of the scheme, Southampton City Council received £2.6 million to reduce nitrogen dioxide emissions which will be used to retrofit 145 buses that operate in the city.

Alongside the need to improve air quality in cities, local authorities are also under pressure to increase fleet capacity in line with rising urban populations. Across the UK local authorities are investing in digital innovations that use data to encourage the most efficient deployment of resources.

An example of one such 'smart' project is the introduction of vehicle routing, which aims to improve the management and flow of fleets of vehicles delivering public services such as waste collection and school transport across our cities. Geographical Information Systems (GIS), which can help to optimise the routing of services, are being installed so that better services can be delivered with fewer assets (vehicles, people and equipment). These changes to infrastructure are being replicated across the transport sector.

Forward-thinking local authorities are exploring the benefits of intelligent, integrated transport networks that are able to monitor routes and respond to disruptions in real-time. The announcement from Buses Minister Nusrat Ghani at the 2019 UK Bus Summit highlights the UK's commitment to improving bus

infrastructure, particularly for rural bus services. The Minister announced the deployment of £4 million for a digital platform that will make use of GPS data to facilitate the use of buses across England.

While the government's renewed commitment to its bus strategy has the potential to stimulate growth in the bus sector, further funds are required to fill the current investment gap. Investing in fleet upgrades or expansion requires financial resources that may be beyond the reach of city council public budgets. The reality is that cities need to access a blend of public and private sector finance to accelerate investment in a timely way and benefit from the resulting savings, efficiency, quality and citizen service improvements as quickly as possible.

“ Specialist financiers are able to offer finance models that look at the Total Cost of Ownership (TCO) of a fleet ”

Specialist financiers are able to offer finance models that look at the Total Cost of Ownership [TCO] of a fleet, for example. This would analyse fleets on the basis of cost per kilometre, rather than the cost an individual vehicle. In this way, options can be directly compared and incorporate the full range of costs including capital expenditure, operating expenditure and any financing cost. These bespoke, consultative models are built around the capital needs of the customer, designed to be long-term and offer the flexibility to accommodate future changes to technology.

These tailored financing packages tend to be offered by specialist financiers, such as Siemens Financial Services,

which has an in-depth understanding of energy-efficient equipment and technology and its applications. Specialist finance providers understand the importance of implementing new equipment and new technology to generate revenue and cut operational expenses, and can therefore provide customised financing solutions that deliver energy savings and lower expenses, for instance, flexing the financing period to suit cash flow. This contrasts with the standard financing terms usually available from generalist financiers. Buses have been a constant of public transport for over a century but as the pace of change quickens, local authorities need to look to the future of urban mobility and innovate accordingly. Connected vehicles have the potential to enhance urban mobility and infrastructure efficiency, while upgraded bus fleets can improve air quality by reducing dangerous emissions. Instead of viewing costs of vehicles in isolation, bus operators can work with financiers who analyse the whole fleet, building a collaborative, flexible and consultative approach towards energy efficient and digitalised technology as it continues to develop into the future.



BAE Systems upgrades electric bus powertrain



BAE Systems has unveiled its next-generation electric power and propulsion system for city buses.

The Series-EV system uses fewer, lighter and more compact components to make it easy to install and reduce the need for future maintenance. The system's light weight and reduced number of connections help to make the most of its power and paves the way for buses to travel longer distances on a single charge.

As part of this unique design, it also allows operators to customise based on their propulsion or accessory power requirements. Larger buses would require more traction power and the addition of air conditioning on the bus would increase the accessory power needed.

"Many cities are striving to get to zero emissions with their bus fleets and we are committed to supporting them with all-electric solutions that meet their needs and exceed their expectations," said Steve Trichka, vice-president and general manager of Power & Propulsion Solutions at BAE Systems.

"Our Series-EV system provides operators with a highly reliable and low-cost battery electric option that not only gives them more flexibility and capability, but allows them to completely eliminate emissions on their bus fleets."

BAE Systems has more than 10,000 electric-hybrid systems in service around the globe including major cities such as Paris, London, New York, and San Francisco.

ULTRAFABRICS LAUNCHES 'GREENER' RANGE

Ultrafabrics, the leading manufacturer of high-performance fabrics, has launched Volar Bio, which uses renewable plant-based materials in the multiple layers of the seat fabric. Corn-based content is used to prepare polyols for polycarbonate polyurethane resin and wood pulp-based materials are incorporated into the twill backcloth.

Volar Bio was created with both functionality and sustainability in mind and has a 29% BioPreferred Program Label, a system managed by the U.S. Department of Agriculture, designed to provide useful information to consumers about the bio-based content of a product.

Volar Bio combines subtle organic texturing with a semi-lustrous base. The unique matte surface doesn't compromised the performance of Ultrafabrics.



Brigade has launched the Essential Camera Monitoring System – a cost-effective reversing safety device.

The Essential Camera Monitoring System provides the driver with a visual aid inside the cab to eradicate this blind spot.

- Simple 'plug & play' installation
- 18 Infra-red LEDs for optimum performance at night
- 83°(H), 64°(V), 110°(D) viewing angle
- One year warranty



Remote camera is the ultimate

Laser Tools' inspection camera 7604 is a high-performance industrial endoscope with a high-resolution, five-inch colour LCD display.

The flexible probe is a metre long and just 3.9mm in diameter. The inspection camera has numerous applications from inspecting behind engines, to locating lost keys. The camera probe is so narrow it can be used for inspecting combustion chambers through the glow plug aperture.

The instrument is fitted with an 8GB Micro SD card to save images and video. Sound is also recorded. The still image or video files can be transferred to a PC or laptop via the supplied USB lead or by removing the Micro SD card from the inspection camera and connecting to the PC via a card reader.

Available now from your Laser Tools stockist, the 7604 inspection camera is typically priced at £589.00 including VAT.



DO YOU HAVE A TECH STORY TO TELL? CALL BUS & COACH BUYER ON 01733 363476

eSprinter arrives in 3.5-tonne guise

Mercedes-Benz will this year begin delivering eSprinter, with a flexible battery and payload concept, plus an eCharging planner advice tool.

As the second commercial model after the eVito, it continues the consistent electrification at Mercedes-Benz Vans. eSprinter is intended to cover the broadest possible range of use in urban logistics, being offered as a 3.5-tonne panel van with a load volume of 10.5 m³ – the same as for a standard 3.5t Sprinter.

As with the entry-level diesel engine, the electric drive in the eSprinter drives the front wheels with an output of 85 kW and a torque figure of up to 295 Nm. A flexible payload and battery concept allow adaptation to individual needs for practical use. The range with a utilisable battery capacity of 47 kWh (installed: 55 kWh) is 168km, with a maximum load of 891kg.

A second battery option takes into account other priorities in the use parameters: the configuration with a utilisable capacity of 35 kWh (installed: 41 kWh) allows a range of 115km. In turn, the maximum load rises to 1045 kilograms.

The integrated quick-charge function also ensures flexibility, thanks to which around 80% of the energy can be recharged within 30 minutes. The maximum speed can be configured to suit the task in hand: Maximum speed can be set at 80 km/h, 100 km/h or 120 km/h.

The eSprinter has four energy recovery levels, selected with the steering wheel paddle shifters. Three drive programs, E+, E and C, are selected via the drive program button in the centre console. Depending on the selection the eSprinter drives either particularly efficiently or



focuses on higher comfort, in which the climate control is adjusted in favour of a higher range, for example.

During recuperation energy is reclaimed if the vehicle is decelerated. For example, the battery charges when going downhill, instead of losing the energy when braking. The respective setting for the drive program and recuperation level is displayed in the display of the instrument cluster. With this route-based operating-mode strategy the economy of the vans can be further optimised with electric drive in daily operation on the road.



eSprinter	
Max. electric motor output (kW)	85
Electric motor rated torque (Nm)	295
Top speed up to (km/h)	80 (100; 120)
Local CO ₂ emissions (g/km) ¹	0
Maximum load capacity (m ³)	10.5
Perm. gross combination weight (kg)	3500
Payload capacity (kg)	1045/891
Utilisable battery capacity (kWh)	35/47
Installed battery capacity (kWh)	41/55
Electric consumption (kWh/100 km) ¹	37.1 - 32.5 [3]
Charging capacity (kW)	7.4 (AC) / 20 as standard, optionally 80 (DC)
Electric range (km)	120 - 168 km ¹
Charging time ^[4] at a wallbox or at a public charging station (AC charge) [h]	Approx. 6 h (AC 7.4 kW) / approx. 30 Min (10-80 %) (DC 80 kW)

BUS BATTERIES GET A SECOND LIFE

Volvo Buses is giving a second life to batteries from electric buses, in a cooperation with Stena Property and Stena Recycling's subsidiary BatteryLoop.

The project is a step towards circular economy in electromobility creating new commercial possibilities for companies: "Reuse of the batteries from our buses gives them a second life, allowing us to use resources in a better way while at the same time reducing our climate impact," says Håkan Agnevall, President Volvo Buses.

Volvo Buses is running a similar project together with several partners in the Viva residential area in Gothenburg.



ITT Hub confirms dates for second show in 2021

An "extremely strong and positive" response to the inaugural ITT Hub 2020 show - on 13 and 14 May at Farnborough - has led the show organisers to confirm that the second annual show will take place in 2021.

Announcing the dates for the second show - 12 and 13 May 2021 - the organisers have confirmed that ITTHub - Innovation & Technology in Transport - will remain at the outstanding venue of the Farnborough International Exhibition & Conference Centre, just outside London.

Mark Griffin, CEO of organisers Binswood Media, said: "We are naturally

looking forward to this year's inaugural event in May, but to enable companies to plan ahead, we are pleased to already be able to confirm the dates for next year.

"As well as underlining our ongoing commitment to ITT Hub, its exhibitors, Commercial & Event Partners and visitors, this also further cements our long-term relationship with Farnborough International, who continue to work very closely with us in the launch and on-going development of this new event.

"It is a measure of the confidence in the show, which will be the coach and bus sector's 'shop-window' this spring."

VOLVO APPOINTS TOP MAN FOR AUTONOMOUS SOLUTIONS

Nils Jaeger, currently President Region EMEA, Volvo Financial Services, has been appointed President and Head of Solutions of the new Volvo Group business area Volvo Autonomous Solutions. Its financial results will be reported as part of the Truck segment.

Volvo Autonomous Solutions is a new business sector that comes into operation this year, and has a remit to accelerate the development, commercialisation and sales of autonomous transport solutions.

This will enable Volvo to meet a growing demand and to offer the best possible solutions to customers in such segments as mining, ports and transport between logistics centres, as a complement to today's products and services.

Mr Jaeger will report to the Volvo Group President and CEO Martin Lundstedt and be a member of the Group management team.

Born in 1969, Nils Jaeger has served as President Region EMEA (Europe, Middle East and Africa), Volvo Financial Services since 2014. Before joining the Volvo Group he has held several leading positions at John Deere.

As the President of Volvo Autonomous Solutions Nils Jaeger will lead a new business area responsible for further accelerating the development, commercialization and sales of autonomous transport solutions from the Volvo Group.



FORS programme 2020 announced

The Fleet Operator Recognition Scheme (FORS) has announced the 2020 schedule for its FORS Practitioner training sessions.

FORS' series of ten workshops announced for this year are each delivered by transport experts at key venues across the UK, giving managers the tools and knowledge to embed FORS best practice across their business.

FORS Practitioner workshops cover all aspects of fleet management, specifically designed to equip delegates with the tools they need to make their operations safer, smarter and greener. Delegates attending all ten workshops become

qualified FORS Practitioners, joining an elite group of over 1,900 individuals who have reached FORS Practitioner status.

The series provides a complete package of fleet management, inclusive of managing work-related road risk, safe and efficient fleet utilisation, reducing fuel use and minimising fines and charges.

The FORS Practitioner workshops are

- Developing fleet management policy
- Managing work-related road risk
- Managing driver fitness and health
- Managing driver training and development
- Collision procedures and analysis
- Safe and efficient fleet management

- Reducing fuel use and minimising environmental impacts
- Minimising transport fines and charges
- Measuring and monitoring road fleet performance
- Managing noise in logistics

The latest series of workshops are due to take place between January and March in Edinburgh, Altrincham, Birmingham, Cardiff, London, Croydon, Bedford and Corby, with dates added for the remainder of the year in the coming weeks.

For more information visit
 🌐 www.fors-online.org.uk

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Richard Brown. *Transport Manager, Fly By Nite.*



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