

The cancellation of the big German trade show IAA did not stop Continental, Daimler and ZF from presenting innovations via virtual gatherings. Key points are summarised here



IAA, REPLACED

The biggest news came from vehicle OEM Daimler (Mercedes-Benz and Citaro), whose 23 September presentation Shaping the Now and Next, covered its bus and truck, and electric and hydrogen powertrain plans for the next decade (watch again via www.is.gd/afekab).

Top of the tree was the GenH2 Truck (pictured above), a fuel-cell truck with a range of up to 1,000km for long-haul transport beginning customer trials in 2023, and entering series production after 2025. Thanks to the use of energy-dense liquid hydrogen, the vehicle's performance is claimed to equal that of a comparable conventional diesel truck. An expansion of Germany's hydrogen refuelling network was also discussed.

Meanwhile, the new eActros LongHaul, a battery-electric truck with a range of about 500km for energy-efficient transport on predictable long-haul routes, is projected to be ready for series production in 2024. The comparatively short range of the eActros LongHaul on one battery charge is offset by its high energy efficiency, the company states. Truck drivers have to take a break of at least 45 minutes after 4.5 hours of driving, time that can be

spent charging the battery to produce "a large proportion of the energy needed for the ongoing journey."

Third was Mercedes-Benz eActros, a battery-electric truck with a range of well over 200km for heavy urban distribution, scheduled for series production in 2021. Payload is said to be on par with the conventional Actros. The eActros will be available at launch as a two-axle and a three-axle model. Specifically for municipal use is an eEconic based on the Mercedes-Benz eActros and intended to follow it into series production in 2022.

Martin Daum, chairman of the board of management of Daimler Truck AG said that the company is aiming to

produce fuel cells in a German joint venture with Volvo Group. Daum said: "Battery power will be rather used for lower cargo weights and for shorter distances. Fuel-cell power will tend to be the preferred option for heavier loads and longer distances."

On the bus side, the company launched a full-electric articulated bus with solid-state batteries, eCitaro G. Also launched was intercity bus, the Intouro, claimed to be the first bus with Active Brake Assist 5 that can automatically stop to prevent a pedestrian collision.

Turning to safety features, a Sideguard Assist system, which warns the driver of at-risk road users during



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right-hand turns, will automatically stop the vehicle using emergency braking at speeds up to 20kph. Active Drive Assist has been similarly updated.

Finally, the brand has launched a platform of digital services. Following acquisition of Mobile Workflow Management technology last year, a new HABB Transport system will link vehicle information provided by Fleetboard, such as driving and rest times or GPS position, with current journey status.

CONTINENTAL

The tyre, tachograph and services supplier's Commercial Vehicle Days was held 7-10 September (and can be viewed again via www.is.gd/sidano). It covered four product areas: environmental sensing, load monitoring, cybersecurity and smart tachographs.

First, it predicts that forward-looking camera technologies (radar and cameras) will support emergency lane-keeping, intelligent speed assist and a moving-off information system; side-looking technologies will offer a blind spot information system, automatic manoeuvres to protect vulnerable road users and right-turn assist at junctions. Driver cameras will offer drowsiness and attention warning, advanced driver distraction warnings and detection of driver health. Rear-looking cameras will offer reversing detection for rigid.

In the nearer term, Continental has developed an on-board weighing system for commercial vehicles and

trailers (pictured above). EU Directive 2015/719 requiring regular weight measurements of commercial vehicles comes into force in May 2021. The system uses various means. For air suspension, an ultrasound sensor gauges the height and pressure of air springs to determine axle loads. Also developed is a height sensor for shock absorbers for vehicles without air suspension. Furthermore, a sensor measures strain in the steel and air-sprung axle bodies. Combining all of these systems enables load calculations.

A survey of German road transport operators, associations, authorities and service providers (www.is.gd/sakalu) found little general awareness of the need for protection against cyberattacks. Gilles Mabire, head of its commercial vehicles and services business unit, says: "Cybersecurity protects the benefits of digitalisation, which is vital for the commercial vehicle industry in particular. It therefore deserves more attention."

One slick new offering requiring cybersecurity is cloud-based keyless access. Based on passenger car tech, a smartphone app is used to gain on-demand access to the vehicle, with final authorisation granted through the Continental Cloud and a truck-mounted control module. With it, users can open, lock and start the vehicle.

Finally, the company explained how tachographs can help fleet management and enhance microservices.

ZF/WABCO

On 6 October, component supplier ZF offered a presentation called 'transformation in transport' (watch it via www.is.gd/coxuww). The company said: "Building on its recent acquisition of WABCO, ZF is accelerating the development of its product and systems portfolio to enable intelligent commercial vehicles." It announced five innovations.

First was a proof-of-concept for a fully-automated coupling assist system for tractors and semitrailers (pictured, p26). By processing images taken by a digital camera, the system can control the tractor in longitudinal, lateral and vertical directions. ZF claims the system cuts coupling time by more than half.

Also proposed on the reversing front was an advanced driver assistance system (ADAS) for entire tractor-trailer combinations using a camera that covers the rear blind spot. With input from that camera and a new articulation angle sensor, the system offers drivers reversing paths, the company says.

Claiming to improve riding stability is a new connection between vehicle motion control systems such as driveline, braking, stability and steering and an autonomous driving 'virtual driver'. That system can use artificial intelligence to calibrate the vehicle in potentially-risky manoeuvres such as cornering or changing lanes, the company says.

It has also launched a lightweight chassis tractor truck (saving 150kg) with aerodynamic semi-trailer.

Finally, by 2023, ZF will expand its CeTrax central drive to offer a modular electric drive kit with axle and central drives for buses and trucks up to 44t. Of particular interest is the eTrailer, a semitrailer with integrated electric motor that help reduce fuel consumption of diesel-powered combinations; fuel savings of up to 16% are claimed. [IE](#)