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Truck makers count on connected tech to improve productivity

Truck makers are embracing connectivity as the transportation and logistics industry looks toward digital technology to improve efficiency.

At a conference on autonomous and connected vehicle technology in early April, executives from some of the leading truck makers and fleet management technology providers discussed the latest developments in connectivity and logistics. The conference – SMMT Connected 2019 - was hosted by the UK's Society of Motor Manufacturers and Traders (SMMT).

Volvo Trucks is embracing app technology to scorecard drivers on performance, including fuel

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efficiency. Condition monitoring – using telematics to assess engine performance or issues that may occur in the truck itself – is also an area of development at Volvo Trucks.

One focus is on vehicle uptime, which is important for productivity, said John Comer, head of product management at Volvo Trucks. Intelligent monitoring saves time by targeting when a problem can be dealt with. "If we can save time on the vehicle coming into the workshop and do conditioning monitoring on the vehicle [on the road] it is important for productivity," he said.

At Mercedes-Benz Trucks, keeping vehicles moving is also a priority. "Use of the vehicle is important, if it is broken down it is not helping anyone," said John Armes, senior connectivity specialist.

The Mercedes Trucks diagnostics system "talks to the vehicle all the time, looking at CPUs [central processing units] and tolerances," he said. "It sees if a problem is developing that needs to be dealt with and whether than can be done on the six-week inspection or it is something that can wait until the next service."

In terms of performance, Mercedes-Benz Trucks is also rolling out an open platform app portal to support general or specific apps that improve performance. These apps show how efficiently trucks are used, whether they are fully loaded, or whether a load is available for the return leg of a journey.

Said Armes: "We have a wide range of apps, for instance, to tell driver where is the next secure parking lot, which is important for securing the load."

Data is key

Truck makers said vehicle data are key to making more productive use of a fleet. There are many service providers that offer products for this.

Microlise, which specialises in fleet telematics, is capturing 21.9 billion journey 'events' every year from fleets in the UK, said the company's CEO, Nadeem Raza. That includes vehicle diagnostics, driver behaviour and a range of peripheral information including topography, load factor and driving time.

"We collect data about the vehicle itself from the engine management system but we also have

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other data collection sensors on the truck to gauge weight, see where the doors are opening, or making sure things are being loaded and unloaded at the right place and time, for example," said Raza.

It is a two-way system because the technology used to gather data is also able to send information to the driver. Telling him what the next delivery route will be is a case in point.

Volvo's Comer said this kind of connection with the truck driver is important in the industry today. And it improves the truck's performance.

"Drivers are in short demand and the truck is changing: most are now two-pedal control trucks," he said. "Using cloud-based data we are able to look at the truck topographically and using the predictive cruise control we can get a better management of the vehicle making sure it is in the right gear at the right time."

That level of connectivity is something that Microlise is looking at on a fleet level. CEO Raza said getting real-time information allows fleet managers to make better use of their vehicles. "Having that information and being able to plan and communicate and redirect vehicles according to changes to operations, and do it efficiently, is an advantage," he said.

Greater connectivity is now central to operational performance in logistics and as 5G mobile communictions networks expand there will be more opportunity to exchange greater amounts of data with a the delivery vehicle.

City infrastructure

Truck makers expect cooperation with cities to increase as they jointly address urban traffic infrastructure bottlenecks. Truck data is already being provided to organisations such as Transport for London, the local government body responsible for the transport system in Greater London, including through camera data to the transport police, but the technology here needs to be improved.

However, in the future there will be better and more dynamic collaboration, Microlise's Raza predicted. "Information about traffic in the city and forward-looking forecasts will mean that we can alter routes into cities more dynamically and still deliver things in a cost efficient way," he said.

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