VOLVO

Communiqués

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Your Volvo car will understand you when you're not at your best – and step in when you need support

We all like to think that we're good drivers, but we also know that even the best among us make mistakes. People can be distracted, stressed, drowsy or in another state that impacts driving. And when people are not at their best, they may need help.

To reach our vision of a future with zero collisions, we have to look at all the reasons for why a crash might happen. Traditionally, we have focused on getting our cars to better understand what's happening around them to help protect the people inside.

But to break new ground in how to protect people, we need to go further – we need to improve the car's understanding of the driver's state.

That is why we're introducing our driver understanding system as standard in our EX90, which will be revealed on the 9th of November 2022. This real-time interior sensing system is guided by a straight-forward concept: if a Volvo car can understand when the driver is in a state that isn't optimal for driving, the car can make sure to take action to help avoid accidents.

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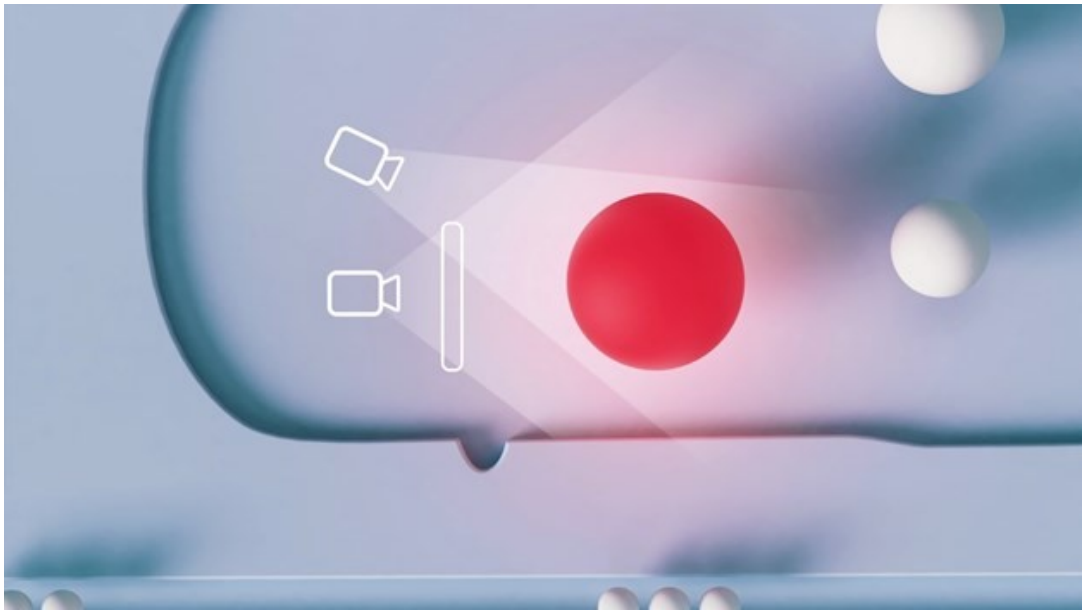
Our driver understanding system

The system will debut in the EX90 and complement a state-of-the-art exterior sensor set.

"Our research shows that by simply observing where the driver is looking and how often and for how long their eyes are closed, we can tell a lot about the state of the driver," said Emma Tivesten, Senior Technical Expert, Volvo Cars Safety Center.

"By basing its calculations on our research findings, the sensing system allows our cars to identify whether the driver's ability is impaired, perhaps due to drowsiness, distraction or other causes for inattention and to offer extra assistance in a way that best suits the situation."

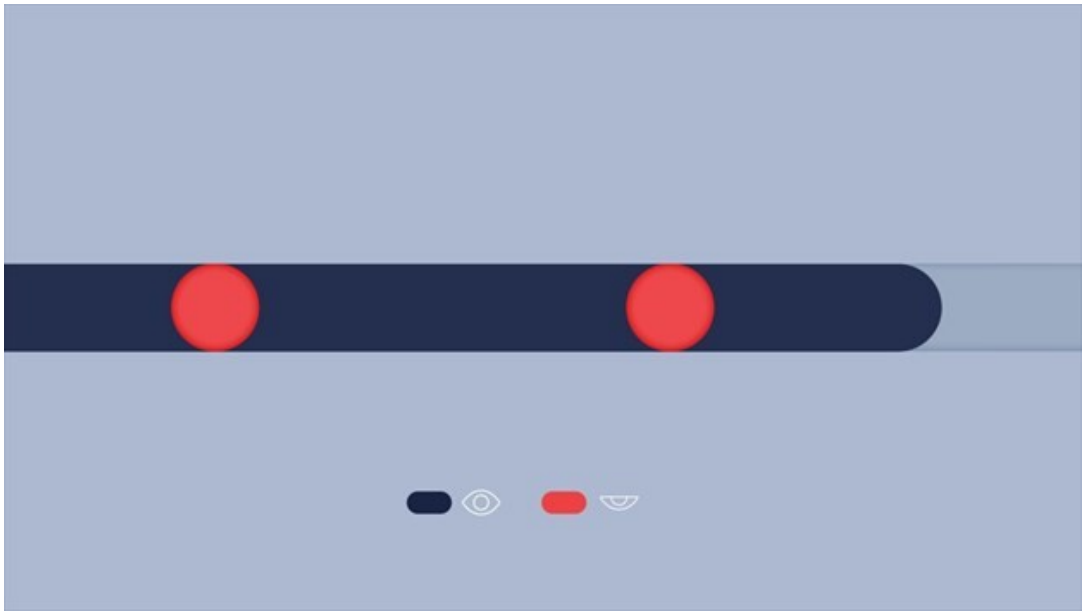
Using its two cameras to pick up early signals that indicate that the driver is not at their best, the system observes the driver's eye-gaze patterns. By measuring how much of the time the driver looks at the road ahead, allowing for natural variations, it understands when the driver's eyes, and perhaps therefore mind, are focused somewhere other than on driving.



Is the driver looking at the road too little? It can be a sign that they are visually distracted, perhaps from looking at their phone. Too much? That can be a sign of cognitive distraction, which could mean that the driver is occupied by their thoughts to the point where they no longer register what they are looking at.

The car's capacitive steering wheel also plays a role. It senses if the driver lets go of the wheel, thus monitoring the stability of their steering input.

By using our patented technology for real time sensing of gaze patterns and steering behavior, the car will be able to take appropriate action to help the driver when needed. The assistance can start with a simple warning signal that grows in volume with the severity of the situation. If the driver doesn't respond to increasingly clear warnings, the car can even safely stop by the side of the road, sending a warning to other road users with its hazard lights.



"We've made great progress on exterior sensing in the last decades, thanks to our committed work on crash prevention systems," said Thomas Broberg, Acting Head of Volvo Cars Safety Centre. "Interior sensing is one of the next safety frontiers for us. We will continue to learn, develop and deploy new features step by step to help improve safety as our knowledge increases and matures."

Volvo Cars in 2021
Volvo Car Group recorded an operating profit of 20.3 BSEK. Revenue in 2021 amounted to 282.0 BSEK, while global sales reached 698,700 cars.

About Volvo Car Group
Volvo Cars was founded in 1927. Today, it is one of the most well-known and respected car brands in the world with sales to customers in more than 100 countries. Volvo Cars is listed on the Nasdaq Stockholm exchange, where it is traded under the ticker "VOLCAR B".

Volvo Cars aims to provide customers with the Freedom to Move in a personal, sustainable and safe way. This is reflected in its ambition to become a fully electric car maker by 2030 and in its commitment to an ongoing reduction of its carbon footprint, with the ambition to be a climate-neutral company by 2040.

As of December 2021, Volvo Cars employed approximately 41,000 full-time employees. Volvo Cars' head office, product development, marketing and administration functions are mainly located in Gothenburg, Sweden. Volvo Cars' production plants are located in Gothenburg, Ghent (Belgium), South Carolina (US), Chengdu, Daqing and Taizhou (China). The company also has R&D and design centres in Gothenburg, Camarillo (US) and Shanghai (China).

For further information please contact:
Volvo Cars Media Relations
+46 31-59 65 25
media@volvocars.com

Volvo Cars Investor Relations
John Hernander
+46 31-793 94 00
investors@volvocars.com

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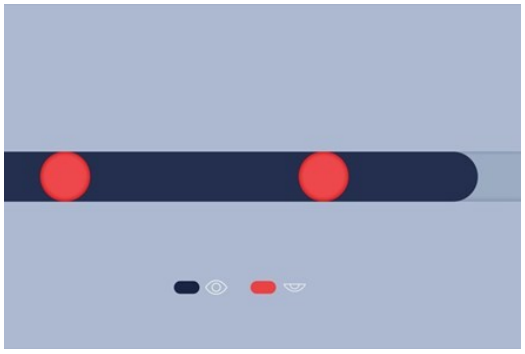
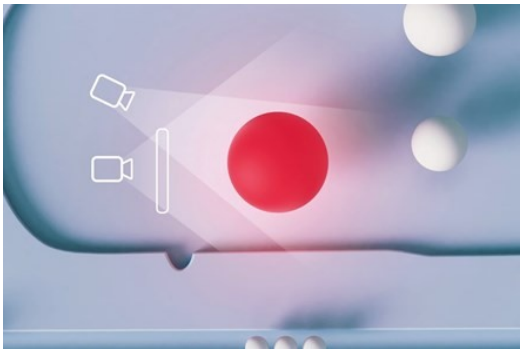
La description et les faits repris dans le matériel de presse concernent la gamme de voitures internationale de Volvo Cars. Les équipements peuvent être optionnels. Les spécifications peuvent varier en fonction du pays et peuvent être modifiées sans préavis.

Images liées





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