



## **Safe and sound from A to B: Bosch RideCare solution helps keep carsharing vehicles in impeccable condition**

November 3, 2021

PI 141

Pilot projects with carsharing providers in Europe, North America, and Asia

- ▶ A world first: Bosch RideCare services use just one sensor box to detect damage to a vehicle and smoke inside the vehicle.
- ▶ Artificial intelligence enables the transformation of raw data into rich, meaningful information for fleet operators.
- ▶ A global solution with significant growth potential for smart mobility.

**Stuttgart, Germany** – People who use shared vehicles expect the cars they reserve to be roadworthy, clean, and not full of unpleasant odors left by previous users. It's frustrating to arrive at a vehicle that is scratched and dented, or when someone has smoked inside. Thanks to the new RideCare solutions Bosch is developing for fleet operators and mobility service providers, this will soon be a thing of the past. The goal is an even safer and more pleasant ride for every user.

The first standard RideCare features are smoke and damage detection. Bosch combines a sensor box in the vehicle with cloud-based data analysis using artificial intelligence (AI). This allows carsharing providers to receive important, easily understood information in real time on whether a vehicle has been damaged or someone has smoked in it. Repairs or cleaning can then be carried out more quickly and more in line with demand, optimizing fleet management.

“In carsharing, one of the main keys to customer satisfaction is to ensure users have a safe and pleasant driving experience at all times. With its RideCare solutions, Bosch is setting a new standard for an even better customer experience in the sharing market,” said Harald Kroeger, member of the board of management of Robert Bosch GmbH.

Bosch is currently working on pilot projects with leading carsharing providers in Asia, North America, and Germany, aiming to launch a production version of its smoke and damage detection system soon. Bosch also recently received official

approval for this system from globally-recognized testing and certification organization TÜV Süd, including a confirmation of the reliability of these fleet services.

### **RideCare creates transparency and accountability**

Carsharing providers usually receive little if any information about whether their vehicles were damaged or smoked in during a given rental period. While users often report instances of major damage to the car, providers tend to be saddled with the cost of repairing supposedly minor damage. Another source of great dissatisfaction among users is taking possession of a vehicle in which the previous driver has been smoking – an activity that is almost ubiquitously prohibited inside rented vehicles but is difficult for carsharing operators to prevent. In such cases, the cost of professional interior cleaning can often run into several hundreds of dollars. With its RideCare solutions, Bosch can now give carsharing providers clarity instead of conjecture: a sensor box in the vehicle detects both cigarette smoke in the interior and damage to the exterior. Detecting these types of damages with just a single sensor unit is a first in the industry. The solutions available until now could detect either smoke or accidents, but not both.

“Bosch’s combined smoke and damage detection system is the world’s first production solution that can reliably detect and incontrovertibly report both damage to and smoke inside the car,” Kroeger said.

In addition, the box’s sensors are precise enough to detect not only accidents, but even small impacts that can occur during parking. This includes the detection of minor collisions involving a shared vehicle that is parked downtown and not currently rented out. Thanks to the RideCare solution, sharing providers can directly determine who caused the damage or smoked in the vehicle.

### **Bosch combines artificial intelligence with the internet of things**

This innovative fleet service from Bosch comprises a sensor box which is semi-permanently installed on the inner windshield of shared vehicles, as well as intelligent software for data analysis in the cloud. As soon as sensor information about accidents or smoke in the vehicle interior has been transmitted to a cloud back end, Bosch can use AI methods to derive the intensity of any impact and classify it for the fleet operator. Intelligent algorithms incorporate both the vehicle’s driving dynamics data and additional information such as the condition of the road. This means sharing providers can know exactly whether damage is merely cosmetic or whether it needs to be assessed and repaired immediately to ensure that the vehicle remains roadworthy.

“RideCare services are yet another demonstration of the potential of AIoT – the combination of AI and the internet of things. Now, its benefits will also be available to the users of sharing services,” Kroeger said.

Thanks to AI data analysis, Bosch can also identify which part of the vehicle has been damaged –for example on the rear bumper or even on the underbody. This facilitates the documentation and appraisal of the damage. If the data from the sensor box is later combined with images of the damage, fleet and mobility service operators can also obtain an estimate of repair costs on request.

### **Digital solution for fleet management**

For sharing providers, fast and transparent documentation of damage to individual vehicles in the fleet is hugely important, as it is the only way for them to improve roadworthiness and minimize downtime effectively and efficiently. In addition to damage classification, RideCare services also tell the carsharing provider exactly where and when the accident happened, and when someone smoked in the car. This information enables fleet managers and mobility service providers to keep their vehicles in as-perfect-as-possible condition at all times and to enhance driver and passenger well-being.

**Press photos:** 3331e39e, 1d0c3f56, 9d813453, e4eaf0c2, 0b66d09d

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