



Bosch and Mercedes-Benz start San José pilot project for automated ride-hailing service

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- ▶ Bosch and Mercedes-Benz hope pilot automated ride-hailing project will provide additional insights for the development of automated driving
- ▶ Automated S-Class vehicles equipped with Bosch and Mercedes-Benz driving system and software provide shuttle service between West San José and downtown
- ▶ For its part, Bosch develops and manufactures the components for urban automated driving that the alliance has identified
- ▶ Daimler Mobility AG fleet platform allows ride-hailing partners to seamlessly integrate self-driving vehicles into their service portfolio
- ▶ San José contributes its urban infrastructure to the pilot project in order to enhance safety, environmental impact, and traffic flows

Stuttgart, Germany, and San José, CA, USA – Bosch and Mercedes-Benz's joint project to develop urban automated driving has now entered a new stage. Their pilot project for an app-based ride-hailing service using automated Mercedes-Benz S-Class vehicles has now been launched in the Silicon Valley city of San José. Monitored by a safety driver, the self-driving cars shuttle between West San José and downtown, along the San Carlos Street and Stevens Creek Boulevard thoroughfares. The service will initially be available to a select group of users. They will use an app developed by Daimler Mobility AG to book a journey by the automated S-Class vehicles from a defined pick-up point to their destination. Bosch and Mercedes-Benz hope this trial will provide valuable insights into the further development of their SAE Level 4/5 automated driving system. The partners also expect to gain further insights into how self-driving cars can be integrated into an intermodal mobility system that also includes public transportation and car-sharing.

Bosch, Mercedes-Benz, San José – partners for the future of mobility

In mid-2017, San José was the first U.S. city to invite private companies to carry out field tests of automated driving and analyze the growing challenges in road traffic. Especially in congested city traffic, self-driving cars' permanent 360-degree surround sensing can potentially enhance safety, and their smooth driving style can improve traffic flow. As a city, we want to know more about how automated vehicles can help improve safety and reduce congestion, as well as make mobility more available, sustainable, and inclusive. The project of Mercedes-Benz and Bosch ties in with San José's extensive 'smart city' objectives. It will also help us develop guidelines for dealing with new technologies and prepare for the traffic system of the future," says Dolan Beckel, Director of Civic Innovation and Digital Strategy. "If automated driving is to become everyday reality, the technology has to work reliably and safely. And this is where we need tests such as our pilot project in San José," says Dr. Michael Fausten, head of engineering for urban automated driving at Robert Bosch GmbH. "It's not just the automated vehicles that have to prove their mettle. We also need proof that they can fit in as a piece of the urban mobility puzzle. We can test both these things in San José," says Dr. Uwe Keller, head of autonomous driving at Mercedes-Benz AG.

From August through November, representatives of the project joined staff from the City of San José to discuss the project with several community organizations. At seven meetings of neighborhood and business groups along the corridor, the team discussed the project goals, demonstrated the vehicle technology, explained the layers of safety redundancy built into the project, and took suggestions for future use cases.

Bosch and Mercedes-Benz partnering in the U.S. and Europe

For some two and a half years now, Bosch and Mercedes-Benz have been working together on solutions for automated driving in cities. Their common goal is an SAE Level 4/5 driving system for fully automated and driverless vehicles, including the software for vehicle management. However, they are not interested in prototypes, but instead want to develop a production-ready system that can be integrated into different vehicle types and models. In their work to develop software for controlling vehicle movement, the partners deliberately do not rely solely on artificial intelligence and clocking up test mileage. Their engineers also use simulations and specially designed proving grounds to specifically address the kind of driving situations that occur only very rarely in road traffic. For this purpose, engineers at the Immendingen testing and technology center in Germany can also make use of a 100,000 square-meter proving ground designed especially for automated driving. There, complex traffic situations can be reproduced extremely accurately, and as often as desired. For Bosch and Mercedes-Benz, thoroughness and safety are top priorities. In addition, their alliance is not exclusively concerned with the road and weather conditions in the United States. While one part of the team is based in Sunnyvale, a Silicon Valley city between San José and San Francisco, another part comprising engineers from both companies works in the Stuttgart area.

Alliance uses short decision-making channels and direct communication

Wherever they work, the Bosch and Mercedes-Benz associates sit desk to desk. This ensures short decision-making channels and rapid exchange across disciplines. And at any time, associates can draw on the knowledge and expertise of their colleagues in their parent companies. Here, Bosch know-how ranging from sensors, control units, and steering and brake control systems to entire automotive subsystems can be seamlessly complemented by Mercedes-Benz's long years of experience in systems integration and automaking. The division of labor within the project is no different. Mercedes-Benz's task is to make the jointly developed driving system ready for installation in the vehicle, and to provide the necessary trial vehicles, test bays, and test fleets. For its part, Bosch develops and manufactures the components for urban automated driving that the alliance has identified.

Platform allows integration of automated vehicles into taxi fleets

Specially for their automated ride-hailing service pilot project, Bosch and Mercedes-Benz have taken a further partner on board: Daimler Mobility AG is developing and testing a fleet platform to accompany the pilot operation phase. This allows potential ride-hailing partners to seamlessly integrate self-driving (Mercedes-Benz) vehicles into their service portfolio. The platform manages both self-driving and conventional vehicles, including operation and maintenance. An app-based mobility service for conventionally driven Mercedes-Benz vehicles went into operation in the Bay Area in the fall of 2019. The service is also available in the German capital Berlin.

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