



Mercedes-Benz

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## Let's talk Mercedes - Episode 5: Rethinking Safety & Comfort in the new S-Class - Innovation by Intelligence

**Abstract: Sarah Elsser meets Christoph von Hugo, Senior Manager Active Safety, and Oliver Thöne, Program Director S-Class**

The S-Class is considered the “best car in the world” by many automotive experts – due to its pioneering safety features, among other things. For example, the first driver airbag was introduced in the S-Class almost 40 years ago, followed by many other innovations such as ESP to PRE-SAFE. With the all-new S-Class, Mercedes-Benz introduces further ground-breaking innovations both in active and passive safety as well as new comfort features. In addition, the inventor of the automobile shows how safety and comfort features can interact intelligently. Sarah Elsser meets Christoph von Hugo, Senior Manager Active Safety, and Oliver Thöne, Program Director S-Class. They talk about how Mercedes-Benz has managed to reach the next level of safety and comfort and how the different systems interact. The following passages contain some key takeaways of the talk, which have been edited for readability:

- Christoph von Hugo on the objective of active and passive safety: “At Mercedes-Benz it’s not only about mitigating the consequences of accidents but above all, about preventing accidents. If an accident still occurs, we want to ensure that it ends as well as possible for everyone involved. ‘Active safety’ is what’s trying to prevent accidents from actually happening. So we are distinguishing between active and passive. ‘Passive’ means everything that happens after a crash or that tries to make sure that crashes actually don’t end severely, and with active safety, we try to prevent crashes from happening in the first place. And that’s basically what driver assistance systems are all about.”
- Christoph von Hugo on the further development of safety systems: “We are often asked whether today it is only about the further development of existing systems or whether there are new ways to reinvent safety. I’d say it’s both. Of course, we are continuously improving and optimizing the systems we already have, try to increase their performance, make them work with all different kinds of traffic situations. But it’s also about totally new things. Let me just mention one thing that’s called PRE-SAFE SOUND - something that we invented to actually protect the passengers’ hearing; something that nobody ever thought about before. Actually, it was not about the typical injuries you think about, but hearing is an important part. So we tackled that one. So yes, there are absolutely new innovations coming up.”

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\* The figures are provided in accordance with the German regulation 'PKW-EnVKV' and apply to the German market only. Further information on official fuel consumption figures and the official specific CO<sub>2</sub> emissions of new passenger cars can be found in the EU guide 'Information on the fuel consumption, CO<sub>2</sub> emissions and energy consumption of new cars', which is available free of charge at all sales dealerships, from DAT Deutsche Automobil Treuhand GmbH and at [www.dat.de](http://www.dat.de).



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- Christoph von Hugo on safety systems and individual mobility: “I want to work in an industry that makes sure that individual mobility is sustainable, that people can use it, that will extend their scope, that will give them personal freedom. And of course, working in safety, making cars ever safer with more driving assistance systems, but also with better airbag technologies and better structures. This makes individual mobility more sustainable, safer, and thus, more and more people can profit from it.”
- Oliver Thöne on the interaction of safety and comfort systems: “We have new ambient lighting in the car and we asked ourselves the question, how we can bring an additional new function into the car – a further use case with additional customer benefits. And then someone says, ‘let’s try to have some cyclist or pedestrian protection, combined with the blind spot monitoring function,’ and you map the systems to each other.”
- Oliver Thöne on new safety functions based on E-ABC: “E-ABC is another example of the intelligent interaction of comfort and safety systems – it’s the technical basis of our new Impulse Side PRE-SAFE function, which helps us to significantly improve the passive safety of the new S-Class. When the radar sensors detect a side-intruding object before a crash, E-ACTIVE BODY CONTROL lifts the car by up to eight centimetres. And in that case, the other car would not hit the door but the more rigid structure of the car below, and that is helping to evenly distribute the energy and thus protects the passengers.”
- Oliver Thöne on the new rear-axle steering: “I would say the rear-axle steering is another fantastic element of improving comfort because you can just take a turn with the S-Class in a quicker way and with a shorter radius, which is impressive. Parking the new S-Class is extremely convenient. The steering angle of the rear axle is up to 10 degrees for inner-city driving, which is benchmark, and 4.5 degrees outside of cities. So, at higher speeds, driving stability and thus driving safety can be increased, especially during evasive manoeuvres and lane changes, by turning the rear wheels in the direction of the front wheels.”

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**Mercedes-Benz AG at a glance**

Mercedes-Benz AG is responsible for the global business of Mercedes-Benz Cars and Mercedes-Benz Vans with over 173,000 employees worldwide. Ola Källenius is Chairman of the Board of Management of Mercedes-Benz AG. The company focuses on the development, production and sales of passenger cars, vans and services. Furthermore, the company aspires to be leading in the fields of connectivity, automated driving and alternative drives with its forward-looking innovations. The product portfolio comprises the Mercedes-Benz brand with the sub-brands Mercedes-AMG, Mercedes-Maybach and Mercedes me - as well as the smart brand, and the EQ product and technology brand for electric mobility. Mercedes-Benz AG is one of the largest manufacturers of premium passenger cars. In 2019 it sold nearly 2.4 million cars and more than 438,000 vans. In its two business divisions, Mercedes-Benz AG is continually expanding its worldwide production network with over 40 production sites on four continents, while aligning itself to meet the requirements of electric mobility. At the same time, the company is developing its global battery production network on three continents. Sustainable actions play a decisive role in both business divisions. To the company, sustainability means creating value for all stakeholders on a lasting basis: customers, employees, investors, business partners and the society as a whole. The basis for this is the sustainable business strategy of Daimler in which the company takes responsibility for the economic, ecological and social effects of its business activities and looks at the entire value chain.