



MOBILITY CONCEPTS

# E-bikes and Autonomous Shuttles

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A comprehensive toolchain could help to accelerate the development of autonomous vehicles and, at the same time, ensure that they are both safe and reliable. This would make it much easier to cover the unsafe scenarios specified in SOTIF standards and bring autonomous vehicles onto our roads much more quickly. Reliable test methods, more robust systems resulting from increased scenario coverage and greater trust in the performance of the systems can help to ensure that this happens. The goal is for the toolchain to provide a seamless, scalable approach that covers the three key areas of SOTIF scenarios and paves the way for the integration of autonomous vehicles into transport systems.

In Germany, the sales of electric bicycles are outstripping those of bikes with conventional drive systems. At the same time, an increasingly wide range of different electric bike models with more and more powerful drives is becoming available. However, in recent years a growing number of electric mountain bikes with slimmed-down drive units, known as light assist systems, has been introduced onto the market. This is because smaller motors and batteries allow for the development of bikes with a classic design. A combination of a high level of torque assist and a compact wheel design would be a desirable feature.

There are many indications that autonomous shuttles with electric drives could play an important role in urban transport in the near future. As call-and-ride buses, shuttles in scheduled services and compact vans for delivering goods in the last mile, they could help to reduce pollution and traffic volumes in inner cities. A range of promising opportunities are opening up in this sector and therefore suppliers are increasingly launching new and often very interesting solutions onto the market.

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