

How space is connecting cars

May 9 2022



Credit: European Space Agency

Today's connected cars are dynamic, updateable devices—and, because they can be updated, they are well equipped to become tomorrow's cars. ESA is working with European carmakers to ensure that connected vehicles harness the full potential of space.

Modern cars keep themselves within the right lane, alert their drivers to the presence of a moped overtaking in queuing traffic—and keep the

kids entertained in the back while smoothly directing drivers to their destinations. Trials of the first self-driving vehicles are well underway, including an ESA-backed autonomous shuttle bus that transports passengers across the Harwell campus in the U.K.

Keeping cars connected at all places and all times is essential for the smooth operation of modern vehicles. However, in [remote areas](#), vehicles cannot rely on the ground-based next-generation 5G communication links that are necessary to handle the large volumes of data processed by connected cars. Instead [telecommunications satellites](#) ensure that cars remain connected.

Elodie Viau, Director of Telecommunications and Integrated Applications at ESA, is due to address an event on the Car of the Future organized by the Financial Times and held on 9 May.

She said: "Large data volumes and secure connectivity are indispensable in making possible the technologies and [business models](#) in the connected car of the future. Hardly any of the products and services currently being developed—such as autonomous driving, safety applications, navigation, infrastructure deployment, fleet management, [fuel efficiency](#) and so on—would be possible without collecting, transforming and transmitting large volumes of data, thanks to reliable and ubiquitous connectivity across the globe. Satellite data and connectivity are key technological bricks in this wider technology mix that includes terrestrial connectivity and other data sources.

"Europe possesses world-class assets, competences and infrastructures in both the space and automotive industries. More public and [private investment](#) and development are needed to scale up these technologies. Ultimately, the goal is that European carmakers remain competitive and industrially sovereign in their choice of connectivity."

Josef Aschbacher, Director General of ESA, said: "Space is undoubtedly an indispensable part of future connectivity. Just as using [satellite navigation](#) when driving is instrumental today, [satellite communications](#) will be part of global and ubiquitous connectivity solutions tomorrow.

"At ESA, we seek to develop solutions that enable future applications and commercial solutions. We believe that by supporting the European automotive sector to maximize its positive social, economic and environmental impacts, we serve society at large."

He is due to address a separate symposium organized by the 5G Automotive Association, which represents many carmakers that seek to develop standardized protocols for 5G communications, in Berlin on 16 May.

Provided by European Space Agency

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