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## KARYON final results: a step into future cooperative vehicles

Automotive industry is close to providing autonomous driving at a large scale. Cooperative driving will be the next step to further improve early awareness about dangerous situations, overall safety and the efficient use of roads. In airborne applications, cooperation will be one new way to manage increased air traffic and provide a higher level of safety. Cooperation, however, also leads to the problem that safety will depend on new factors, like the quality of vehicle-to-vehicle communication.

KARYON has developed an architecture allowing to treat the safety problem in an adaptive way, based on the quality of communication and on system conditions like failure states and environment perception. The architecture was applied in the development of cooperative scaled vehicles and quadcopters, whose adaptive behaviour in reaction to failures interfering with the cooperation was lively demonstrated in a recent open event (see more in <http://www.karyon-project.eu/> and in <https://www.youtube.com/user/KaryonProject>).

As a benefit, future cooperative cars and airplanes can be built with less costly components and the overall design and development process can be simplified. Further R&D efforts are now needed to increase the readiness of the technology, taking it to a level where it can be integrated in existing platforms. Major companies have showed interest in the project developments, like the Brazilian Embraer, which participated in the project, and European Volvo Trucks, FIAT Research Centre and Volkswagen, which took part of the project Industrial Advisory Board.