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Coordinated by the high-tech company AVL in Graz, Austria Research project VISION-xEV with 14 partners from all over Europe

Starting with the beginning of 2019, a consortium of leading European automotive manufacturers, technology providers, universities and research institutions has launched the collaborative research and innovation project VISION-xEV. Funded by the European Commission under the HORIZON 2020 program, 14 partners from all over Europe closely work together in order to establish advanced simulation tools and methods for supporting the time and cost-efficient development of all kinds of future electric and hybrid vehicles with optimized overall energy efficiency. The VISION-xEV consortium is coordinated by the high-tech company AVL List GmbH based in Graz, Austria.

The European automotive industry is currently faced with major challenges, such as meeting the upcoming CO₂ fleet emission target of 95g/km and the envisaged further reduction of the CO₂ emission limits in the European Union for the period after 2025. In order to successfully master the current and upcoming legislative challenges, further increased electrification and hybridization of the vehicle powertrain is indispensable. The additional electrical components and subsystems adopted for powertrain electrification lead to considerably increased complexity in the development and integration of these into existing vehicle architectures. Furthermore, the introduction of a broad range of new technologies regarding the electric components and related subsystems requires an increased utilization of synergies with technology providers and suppliers to bridge the technological gaps.

The rapid evolution of simulation technology in recent years offers unique opportunities to work at virtual level in order to save time and development costs, both when selecting the optimal configurations and during tests. Using state-of-the-art methods of virtual component development and system integration, the VISION-xEV project investigates how the need for lab and road tests can be reduced by further optimizing and consequently combining the currently available commercial and internal modelling and simulation tools. The activities are aimed at providing the basis for a future electrified and hybrid vehicle powertrain development efficiency gain and related lead time reduction of more than 25% compared to the current state-of-the-art.



The VISION-xEV research and innovation project has a total budget of € 3.9 million and is funded by the European Commission's HORIZON 2020 program as part of The European Green Vehicles Initiative. The following partners are involved in the VISION-xEV project: AVL List GmbH project coordinator (Austria), Aristotle University of Thessaloniki (Greece), AVL QPUNKT Deutschland GmbH (Germany), Consiglio Nazionale delle Ricerche (Italy), Centro Ricerche Fiat (Italy), FPT Motorenforschung AG (Switzerland), Kungliga Tekniska Hogskolan (Sweden), Politecnico di Milano (Italy), Renault SAS (France), Technische Universität Berlin (Germany), Universitat Politècnica de València (Spain), Univerza v Ljubljani (Slovenia), Vrije Universiteit Brussel (Belgium), ZF Friedrichshafen (Germany).

AVL is the world's largest independent company for development, simulation and testing technology of powertrains (hybrid, combustion engines, transmission, electric drive, batteries and software) for passenger cars, trucks and large engines. The company has over 10,400 employees worldwide and achieved a turnover of 1,75 billion Euro in 2018.

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