The APPSTACLE car-to-cloud platform will utilise open, vehicle-independent protocols, ensuring lifetime value for any transport vehicle through upgradable applications. By laying the basis for the development, sale and distribution of on-board and connected applications and car services, great opportunities will be created for new businesses and after-sales products in the automotive domain.

ADDRESSING THE CHALLENGE
The context of APPSTACLE is application systems, software solutions and services in the automotive industry, market demand for which continues to increase and will drive exponential growth in the amount of in-vehicle source code towards 300 million in the near future. In-house automotive software development by individual carmakers or OEMs is insufficient for the industry’s long-term challenges. One solution is to establish a standard car-to-cloud connection, opening the silos for external application and software developers and the use of open source code wherever possible without compromising safety and security. This is the goal of the APPSTACLE project.

PROPOSED SOLUTIONS
The ITEA 3 APPSTACLE project aims to include an open and secure car-to-cloud and cloud-to-car platform that interconnects a wide range of cars and transport vehicles to the cloud via open in-car and Internet connection, taking advantage of hybrid communication technologies (4G, 5G, LTE-V and ITS-G5) introduced to the market for V2X communication. The solution will also include a software development and deployment environment that creates an open ecosystem using Eclipse Community facilities whereby specific quality requirements for automotive industry i.e. security and identity, are met. The platform can be installed in a wide range of vehicles and will connect in-car data to Internet through standard interfaces using IoT connectors that are part of an Eclipse project. The open APPSTACLE application development and deployment ecosystem will allow continuous delivery and upgrade of new application systems, software solutions and services.

PROJECTED RESULTS AND IMPACT
The platform together with the ecosystem further opens new avenues for mass differentiation of cars and transport vehicles. For software developers, it will open new application and business areas for upgrading legacy or even new cars with new innovative features. The way the automotive industry delivers value to the end-users in the near future will be changed thanks to the synergies established between the APPSTACLE consortium partners of leading industrial players covering the complete technology and value chain and cutting-edge academic institutions.
ITEA is a transnational and industry-driven R&D&I programme in the domain of software innovation. ITEA is a EUREKA Cluster programme, enabling a global and knowledgeable community of large industry, SMEs, start-ups, academia and customer organisations, to collaborate in funded projects that turn innovative ideas into new businesses, jobs, economic growth and benefits for society.

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