



CARNET - UPC Technology Center
08. Februar 2022

Testing Autonomous Delivery Systems Across Europe LogiSmile Project Kick-Off Meeting

The kick-off meeting of LogiSmile, a project led by CARNET and co-funded by the EIT Urban Mobility, was held on 17-18 January in a hybrid format. This 2-days assembly was an opportunity for the whole consortium to meet all together and understand all the needs and requirements of the activities planned in the project. Moreover, the City mayor of the first city pilot test – Esplugues de Llobregat – also participated in the event, representing the willingness of public institutions to collaborate in this type of activity.

Today's logistics operations in city centres can lead to negative effects: increase in traffic congestion; safety problems for pedestrians, bikers, and deliverers; air and noise pollution. To tackle these challenges, the LogiSmile partners will test in 3 pilot cities with distinct social and urbanistic backgrounds (Esplugues de Llobregat in Spain, Hamburg in Germany, and Debrecen in Hungary), a fully autonomous delivery system consisting of an autonomous hub vehicle (AHV) that works in cooperation with smaller autonomous delivery devices (ADD). Furthermore, a remote back-end control centre will also participate in the system by managing the communication between the ADD and the AHV, acquiring on-field data, optimizing the fleet operations with efficient routing and cooperation algorithms, and providing a fail-operational solution in case of complex situations that cannot be solved autonomously.

In the very complex framework of last-mile logistics, the ADD and AHV prototypes (including their joint collaboration) have the potential to improve the efficiency of urban goods distribution. They are perfectly suited to the delivery of more and more frequent and fragmented demand. Based on that, the LogiSmile consortium aims to prove the effectiveness of this autonomous delivery system in the reduction of delivery costs, parking problems, emissions, and congestion, while ensuring flexible, rapid, and convenient deliveries. Another one of the main objectives of the LogiSmile partners is also to show to the policymakers and urban planners that autonomous delivery robots (in general, not only the ADD and the AHV) are safe and that a sustainable deployment is possible. Freight autonomous vehicles will undoubtedly be introduced in the market earlier than passenger autonomous cars because they raise fewer safety or liability concerns. As a first step towards the robotization of urban operations, autonomous delivery robots will increase user acceptance towards autonomous technologies, and, in the end, facilitate the introduction of passenger autonomous vehicles.

The LogiSmile consortium is composed of partners from diverse fields resulting in a total number of thirteen partners, Area Metropolitana de Barcelona, Capgemini Engineering, CARNET – UPC Technology Center, DKV Debrecen, Esplugues de Llobregat City Council, ITS Hamburg, Last Mile Autonomous Delivery, NFF – TU Braunschweig, Otostolik, PTV Group, Dirección General de Tráfico, TomTom, UPC-IRI, and UPC-CDEI, where CARNET – UPC Technology Center will take the leading role to ensure the correct development of the project.

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