



Research School for Operations
Management and Logistics

Micro-hub solutions for city logistics

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This PhD program, as a part of NEON project, aims at moving towards a more efficient and sustainable mobility system. We will explore how to use Smart Hubs and Green Vehicles in urban areas to facilitate last-mile deliveries in a supply chain. We have reviewed several papers on the last-mile delivery facilities and vehicles as well as the urban logistics network design problem. The goal is to submit a literature review paper. We are also developing a model on an integrated Two-echelon Green Time-dependent Location-Routing Problem in which urban hubs are located within a strategic time period (long-term decision), customers are allocated to the opened hubs within a tactical time period (medium-term decision), and vehicles routing is planned at the operational level (short-term decision). There are large trucks operating in the first echelon to deliver products from the main warehouse to the urban hubs, and a combination of light conventional vans and zero-emission vehicles in the second echelon serving the last-mile delivery within the city. The objective of the problem is to make a balance between the economic profitability and the environmental sustainability of the project by considering the GHGs emitted by the fossil fuel vehicles in the logistics network.