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Urban consolidation centers: a viable business model and their role in electric powered city logistics

Urban consolidation centers (UCCs) could play a key role in making urban freight transport more sustainable. Very often an UCC is seen as the solution to bundle unorganized logistics activities, usually less-than-truckload volumes, having a city as destination. And although a lot of studies examined the potential benefits of an UCC, and some trials were even undertaken, finding a viable business model to actually run an UCC seems difficult.

This contribution discusses two different UCCs, i.e. the Binnenstadservice in the Netherlands and DHL Supply Chain Spain's UCC in Barcelona (demonstration in the FP7 project Straightsol), in order to formulate the success factors in terms of the public-private partnerships, participation of stakeholders, role of municipalities and government along with financial aspects. Based on these two cases, the important elements for finding a viable business model for an UCC are discussed.

For Binnenstadservice we evaluated the local effects of an UCC, as well as the national effects for carriers, in order to find UCC's value propositions for different stakeholders. For the UCC in Barcelona we evaluated the business case and model during the demonstration period, as well as for large scale utilization in order to find what the critical design choices are for setting up a UCC.

Finally, this contribution discusses a new role for UCCs or transshipment areas; i.e. making zero emission city logistics possible. Due to the limited range of electric freight vehicles, an extra transshipment location close to the city center is necessary to actually use these vehicles for urban freight transport. This contribution discusses the lessons from FREVUE (FP7 project on electric vehicles in city logistics) and the Dutch case of TransMission's Cargohopper. These cases show that a form of urban consolidation makes the use of electric freight vehicles possible in practice.

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