Implementing an urban distribution center: involving stakeholders in a bottom up approach

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Extended abstract

Objectives and motivation
Research in urban freight transport has explored a range of solutions to improve the sustainability of the sector. Urban distribution centers might be one of the most investigated concept in the field. It was often implemented by authorities in order to reduce congestion and improve air quality in the city. A logistics urban platform located close to the city allows to consolidate the goods coming from different suppliers with a common destination. This way, the capacity of the freight vehicles driving in the urban areas is more efficiently used which reduces the need of freight vehicles in the city. Besides, such a platform allows to introduce other sustainable solutions such as environmentally friendly vehicles, night distribution or intermodal transport. As a result, the European commission is calling for a wider implementation of such platforms in their white paper on transport (EC, 2011). They advocate for a more efficient interface between long distance and last mile freight transport.

The Region of Brussels-Capital is planning since its first transport plan in 1998 to introduce an urban distribution center. The local authorities tried to implement one in 2008 but the project failed. The authorities made the mistake of conducting the project in a top-down approach. However, Woodburn et al. (2005) had already identified the importance of involving stakeholders in the first stages of the implementation of an urban distribution centre. The top-down approach resulted in a strong opposition of the citizens and the project was postponed by the authorities.

In 2013, the local authorities renewed their willingness to implement an urban distribution center in the strategic plan dedicated to freight transport (Bruxelles mobilité, 2013). In that context, the Region is supporting a research project that develops different scenarios to improve the sustainability of freight transport in Brussels based on one or several distribution centres. Given the previous experience, the attention of the project is focused on the opinions of the stakeholders. The goal is finally to identify the scenario that receives the best support from the different stakeholders.

General description
The scenarios that have been developed for the Brussels-Capital Region are considering the number of urban consolidation center, their optimal locations and the type of measures to support the scheme. As a result, authorities have to make a decision between the four following options:

1. Keep with the current situation. That is the business as usual scenario to assess the current situation in order to compare it with the other scenarios
2. A scenario with a major urban distribution center. We introduce also in that scenario the toll on heavy goods vehicles that is planned for 2016 in Belgium. It foresees a kilometer tax doubled within the main roads of Brussels and tripled on the municipality streets in Brussels.
3. A scenario with two urban distribution centers, one in the north and one in the south. No toll is proposed in that scenario but night transshipment are possible at the urban distribution centers.
4. A scenario with four urban distribution centers, spread at the different corners of the city. A toll is in that scenario again enforced but it is applied on every freight vehicle, vans included. It also considers the environmentally friendliness of the vehicles. As a result, the vehicles operated by the UCC are only electric or bicycles. Finally, night distribution is possible to the UCC.

In order to include the stakeholders in the decision process, we use the multi-actor multi-criteria analysis (MAMCA). That methodology uses the objectives of the different stakeholders as evaluation criteria for the scenarios. This way, the opinions of the stakeholders are at the core of the methodology. It has been applied in different transport projects (Macharis et al., 2009) and more recently, it was used in the field of urban freight transport (Macharis et al., 2014).

Results and conclusions
The results of the multi-actor multi-criteria analysis will highlight the scenarios that receives the highest support from the different stakeholders. That can give important recommendations to the local authorities before further implementation. But beyond the local benefits, the paper will show the application of a methodology enabling the transfer of a best practice from a bottom up approach. This method is particularly relevant for the implementation of an urban distribution centre given the lessons learned by the litterature.
References

Bruxelles mobilité, 2013. Plan stratégique pour le transport de marchandises en Région de Bruxelles-Capitale.


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