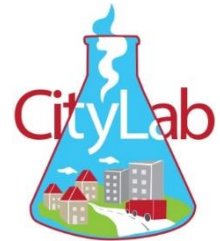
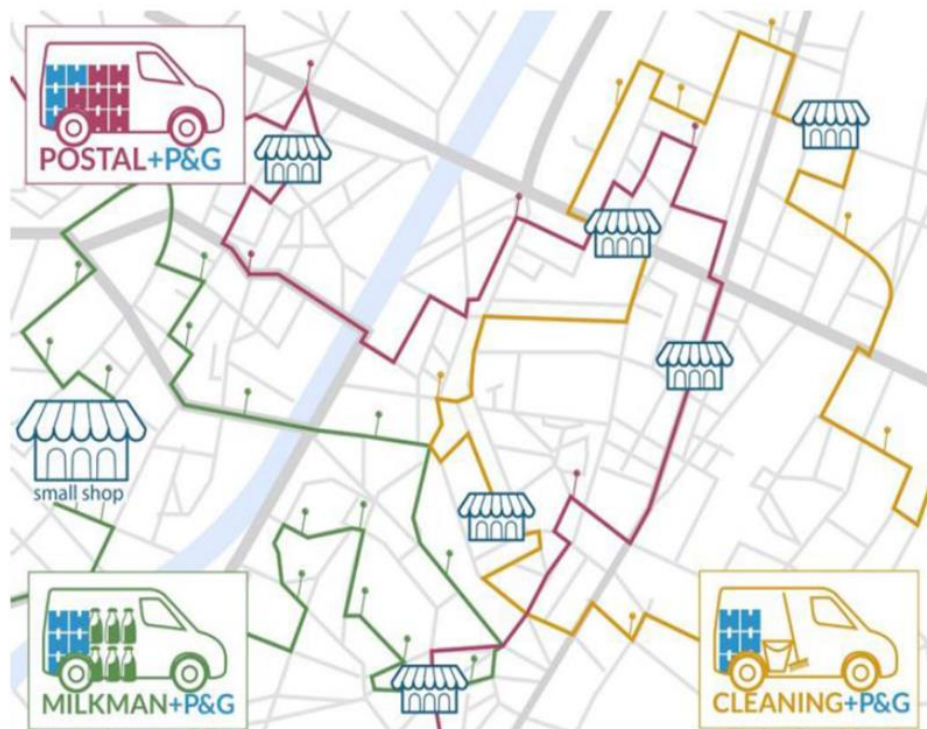


CITYLAB BRUSSELS



The CITYLAB implementation in Brussel aimed to utilise spare transport capacity of providers of other services, such as cleaning companies for delivery of smaller shops. However, shop owners were reluctant to change their habits going to the wholesaler in favour of an online shop for various reasons.



Context

In recent years, Brussels has been one of the most congested cities in Europe. The average time loss compared to free flow traffic is 38%. Vans and trucks account for 25% of transport-related CO₂ and 33% of NO_x emissions in the Brussels Region. Delivery vehicles with a low utilisation rate contribute to this congestion. This implementation aimed to optimise two types of last mile deliveries:

1. Brussels has a considerable amount of small, independent retailers. The majority is supplied by the owners who visit a wholesaler, most of them more than twice a week. Comparable studies suggest a below 25% vehicle fill rate for these trips. However, price, followed by promotions and proximity, are the considerations for the vendors to choose a particular wholesaler.

2. Vehicles of service companies such as cleaning services are inefficiently loaded vehicles too. These trips are hard to capture but form a significant part of traffic. Since they are services, companies are bound to their tours regardless of utilisation factors.

The implementation tested whether load factor can be increased by unlocking spare capacity of service companies to cost-efficiently supply consumer goods to small stores and reduce the generated impacts of distribution and shopping. For the service companies, the purpose was to test whether transporting additional goods is financially and operationally feasible. For the store owners it was examined whether it is convenient to have products delivered. For Procter & Gamble, the owner of the implementation, it was an opportunity to re-establish contact with the storeowners.



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In action

The concept introduced a new online sales channel for reaching smaller stores and using spare van capacity from existing service providers to replenish these stores and thus reducing inefficient storeowner pick-ups, while of the utilisation of service vehicles is increased. Stores could order products in an online shop, followed by online payment. The distributor would inform the owner of spare capacity and deliver the products to their distribution centre. The owner of spare capacity adds the additional delivery to the route, charging the distributor in case of further kilometres.

The aim was to test different set-ups of supplying the targeted 20-30 stores in the Brussels area. A sales representative introduced the concept to the stores and helped them placing their first order. However, few stores were willing to order online. After several deliveries, it was therefore decided not to continue with other companies.

Results

In total, five deliveries were conducted in April-June 2017. The prices offered were competitive to the prices at the wholesaler. Nonetheless, few store owners ordered online. Several storeowners indicated that trips to wholesalers weren't an issue for them. They liked acquiring the products immediately, which is not the case with online ordering and payment before delivery. To collect data on the willingness to order online, additional stores in Antwerp were approached. However, for similar reasons they expressed little interest. The store owners who ordered online in Brussels, did not place a second order. Thus, the implementation was terminated. The store owners who ordered online, indicated that the prices were low and they liked the solution. However, they did not order a second time, most likely because it differed from their routine.

The first effects and consequences are the lessons learned during the planning of the implementation. This particularly relates to the involvement of the owners of spare capacity and store owners. Several service-driven companies expressed their interest to be involved. A new supply chain set-up to reach the stores was examined. Stores in Brussels (58) and Antwerp (27) have been approached, which contributed to understanding their behaviour and reasoning. Five of the stores actually placed an order and subsequently saved on air pollutants and dedicated freight kilometres.

Challenges, opportunities and transferability

The lessons learned from this implementation are important for potential future upscaling and replication. The lessons relate the stakeholders: the owners of spare transport capacity, the owners of stores and the manufacturers.

Based on the implementation, the solution seems technically and operationally feasible for the service companies. However, no conclusions can be drawn on the economic feasibility. Finding service partners remains challenging as they are little aware of the market potential. The company has to be dedicated to develop outside their core business. To fit as partners, they should maintain an already dense network. Based on simulations, ideally service companies would pick-up products from a central distribution centre. In this way additional vehicle kilometres and lead time could be minimised.

Most storeowners supply following economic criteria; they aim to find the lowest price, neglecting additional vehicle kilometres. Products brands or ways of supply account less to their considerations. Additionally, the willingness and ability to pay and order online were the criteria for participating in the project. The ability is determined by the availability of a PC and online bank account. Most storeowners use cash today. Some preferred to pay cash to the driver delivering the products. It was decided to be undesirable to let the driver handle cash because of the additional burden. Finally, lead time is important. When going to the wholesaler, products are acquired immediately and distributors delivers shortly after the sales whereas payment can be done in cash or on credit.

It might be interesting to differentiate the three flows: physical (goods), financial and information. Depending on the location and the characteristics of the storeowners (e.g., internet penetration) some could be adapted. For instance, if a storeowner is happy with the delivery, but does not want to order online, sending a sales person might be a good adaptation. From the perspective of a manufacturer, the solution is a way to (re-)establish direct contact with storeowners, ensuring product placement.

In addition to the lessons listed above, the final question relates to the impact of fragmented deliveries to small, independent retailers for society and how this can be tackled by utilizing spare transport capacity of service companies. Assumed that the spare transport capacity can be utilized, it is first of all important to offer a full product assortment to eliminate inefficient storeowner pick-ups. This requires collaboration between manufacturers.

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