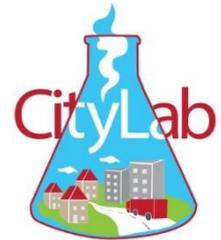


CITYLAB OSLO



The CITYLAB implementation in Oslo promoted in-house freight handling facilities in the Økern shopping mall planned in Oslo. The living lab incorporated all relevant stakeholders including the mall management, the stores and the logistic service providers.



Context

The aim for the Oslo implementation action was improving the conditions for efficient deliveries, return logistics and waste management at multi-tenant shopping centres, and thus reduce the impact of freight movements. Norway is among the countries with the highest concentration (31%) of retail trade in shopping centres. Despite large volumes, the drivers usually deliver directly to individual stores or shop employees collect goods at the loading ramp. This results in long dwell times and vehicle queuing contributing to inefficient space-usage and delivery vehicle utilisation, increased use of fuel, as well as noise disturbance, traffic congestion, and driver stress levels.

Very few Norwegian shopping centres have common logistics functions, thus shopping centres are perceived as “difficult” locations to handle. In the

planning process, facilitation of freight deliveries is considered at a late stage, and has low priority. To improve the efficiency of freight deliveries, this implementation supports planning, e.g. regulatory, technical, design, organisation and financing challenges, when constructing shopping centre infrastructure for common logistics functions.

In action

The CITYLAB was contemporaneous to rebuilding the Økern shopping centre in Oslo. Acting as a Living Lab, the project contributed to the design of efficient in-house logistics services and common logistics facilities. Common logistics function shall handle in-house movements of freight from the freight reception area to the stores, decoupling it from the driver and vehicle. A dedicated company will be responsible for handling all deliveries. In addition to



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deliveries they contribute to more coordinated reverse logistics and waste management, as well as reduced damage on the buildings. The shorter dwell times enable replanning of routes and efficient use of vehicles. The CITYLAB Oslo also assessed the opportunities for providing additional services, such as pricing, unpacking, short time storage, reverse logistics, pick up points for e-commerce and waste collection, such services not fully available at shopping centres today.

Within the Living Lab, several iterations of planning, and design changes of logistics functions were accomplished, i.e. in cooperation with the largest shops, the shopping mall owner planned dedicated infrastructure for their deliveries. This means that common in-house logistic services were adapted. It aimed best possible design of the logistics functions and ensuring that this function is functional accommodating a broad range of deliveries. Due to the flexibility of design approach areas, it remains possible to adjust the solutions for internal logistics.

Results

As the shopping centre hasn't been built, a before-after comparison is not possible. However, results of the STRAIGHTSOL project are comparable. It suggests that in-house logistics facilities significantly cut standing times at loading bays and unloading times could be cut from thirty to two minutes. This results in less need for loading bays. The changes were also associated with improved energy efficiency and emissions. The logistics service providers obtain time savings. Subsequent replanning of routes enable fewer vehicles to serve the same number of clients.

Currently, Oslo is concerned about air quality, particularly NO_x emissions. Trucks contribute significantly to these, predominantly before engines are warm. If stop times are cut, these emissions will be reduced. Introducing common logistics functions marks a first step towards other measures reducing emissions, such as off hour deliveries and the possibility to consolidate shipments externally.

Costs are a remaining obstacle for the up-take of common logistics facilities for stores and LSPs. Experience at the Strømmen shopping mall shows that after a free trial period of the common logistics facility that familiarised the stores with the benefits and functionality, only 50% signed up for the service priced €105 per month per store. Interviews with disinterested stakeholders suggested that 44% were satisfied with the driver goods delivery and saw no need for change. Experiences with mandatory services were more convincing. Seven out of nine responded that they were at least satisfied with the service of the common logistics function.

Conversations with LSPs delivering to the common logistics function suggest support of the concept, but remain unwilling to contribute financially, despite considerable benefits for the LSPs. Previously, stores had demanded delivery within short time windows, which complicated planning cost efficient routes. More flexibility and broader time windows for deliveries eased better utilization of the vehicles. In addition, time saved by delivering to the common logistics function freed up time for the driver and vehicle to perform additional deliveries elsewhere, which according to representatives from LSP companies generates a higher income on the car.

Challenges, opportunities and transferability

To improve the efficiency of freight deliveries, the Oslo CITYLAB supported the design of a common logistics function at a new shopping mall. Studies suggests that common logistics functions can reduce the dwell times of vehicles. Introducing an intermediary between logistics service providers and the receivers of goods helps developing measures for sustainable urban logistics such as off-hour deliveries and the consolidation of freight flows to the shopping centre.

While common logistics functions are known to improve efficiency, they remain uncommon in the Scandinavian context. One reason might be that efficient deliveries are hardly perceived as priority when planning new centres. In many cases, real estate developers neglect deliveries and focus on rents. The innovation of the CITYLAB was thus the engagement of stakeholders in the planning process which helped designing the common logistics functions to fit their needs.

Planning of shopping centres and regular urban streets is different in respect to shopping centres being private property where the shopping centre managers can impose solutions on their tenants. In city centres prescribing solutions might be more difficult. Despite this, the solutions provide an insight in how local authorities may introduce such services in city centres. In Sweden, the company Logistikbolaget AB, who are operating common logistics functions shopping malls, start developing business models for servicing city centres. They propose serving other clients in the close vicinity of centres, thus acting as a consolidation centre for multiple freight receivers. Interestingly, this is close to what FP7 project STRAIGHTSOL considered for an urban consolidation centre in the city of L'Hospitalet de Llobregat in Spain.

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