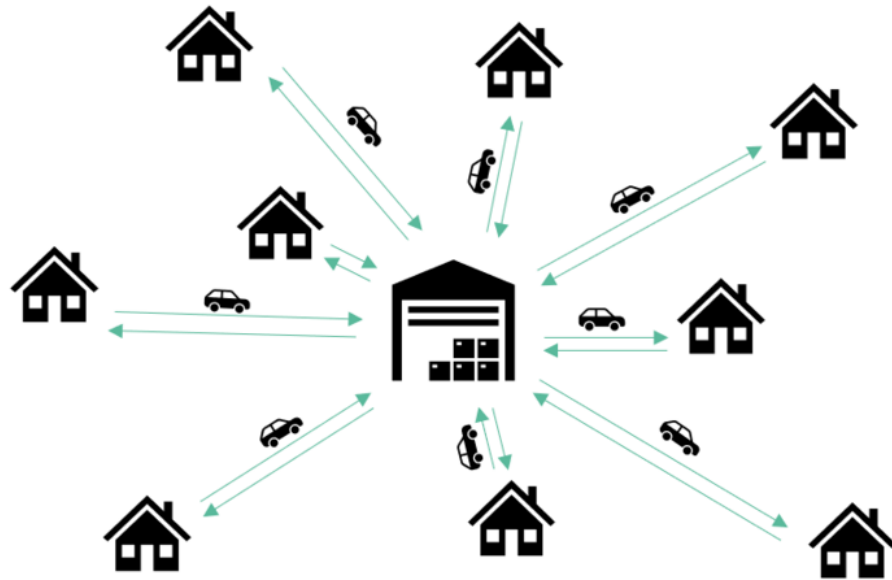


Can urban shopping centres be a solution to cities' e-commerce mobility challenges?

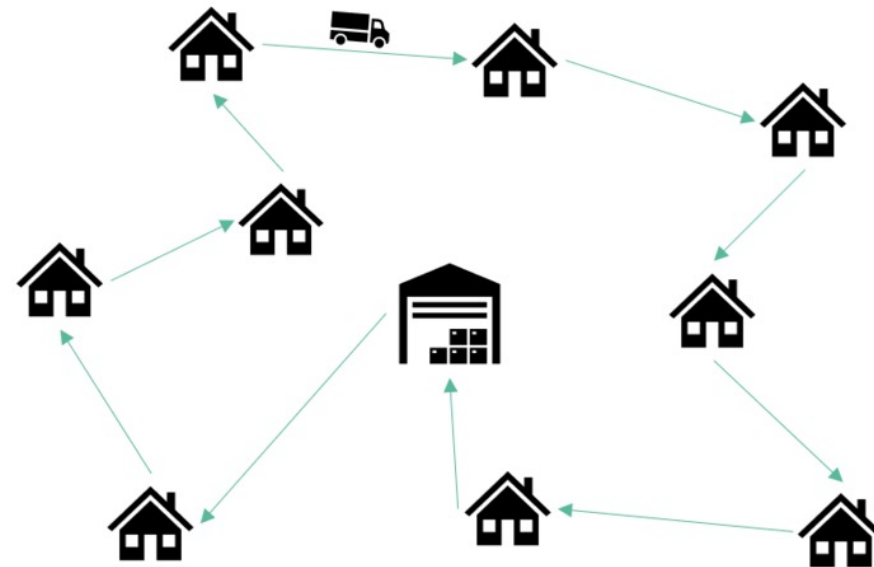
Heleen BULDEO RAI & Paul MARCHER

Logistics City Chair
Univ Gustave Eiffel

According to EY, shopping centre customers optimise their trips by buying **more than six items** on average and by **trip chaining**, making it more environmentally friendly than e-commerce



Store purchase



Online purchase

The impact is positive for urban or suburban shopping centres from the purchase of 4 products, 9 products for out-of-town shopping centres, justifying a journey of 20 kilometres

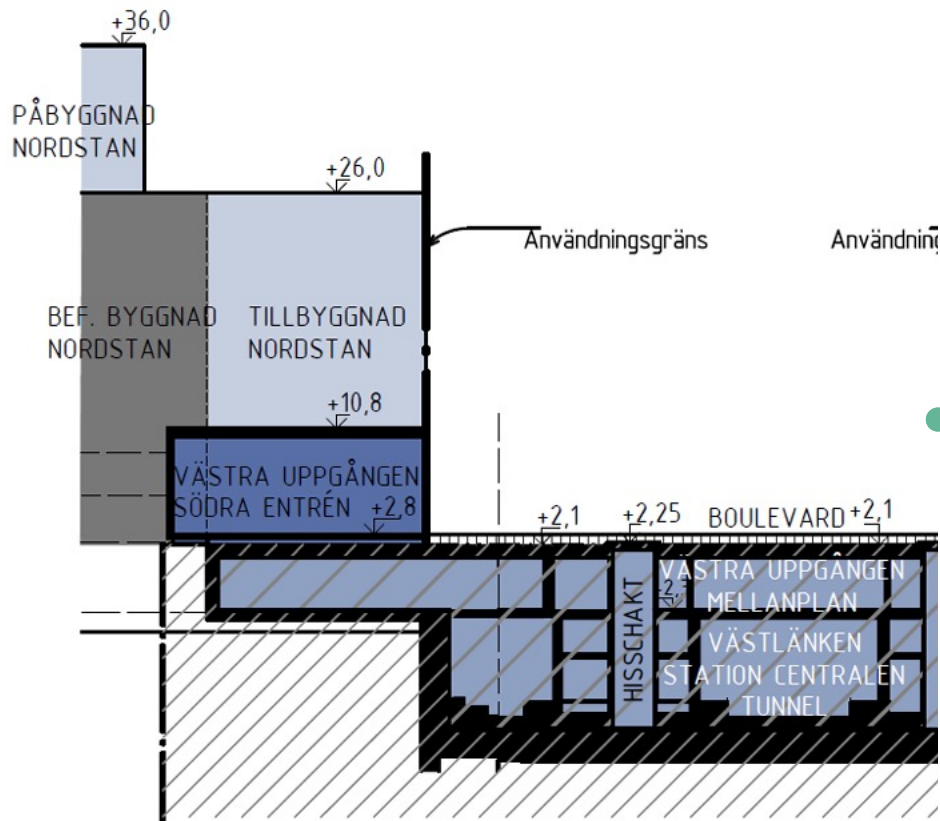


Beaugrenelle, an urban shopping centre



Val d'Europe, a suburban shopping centre

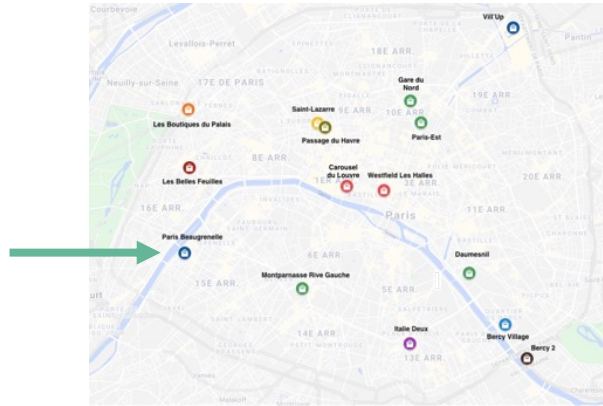
As retail becomes omnichannel, do shopping centres provide sustainable solutions for goods mobility as well? Example from Nordstan in Gothenburg



Underground goods delivery facility to accommodate approximately 300 freight trips per day
Incoming flows, for store replenishment

Project planned to use underground facility as micro-hub for cargo-bike deliveries to other establishments
Outgoing flows, for local delivery

We conducted surveys and observations, mid-2021, on omnichannel logistics operations at two shopping centres: Beaugrenelle in Paris (1/14) and Val d'Europe outside of Paris (1/14)



31/99 retailers surveyed,
observations on July 9 (8AM-9AM), 15 (9AM-10AM) and 23 (9AM-10AM)



33/81 retailers surveyed,
observations on August 4 (9AM-10AM) and 6 (9AM-10AM)

Beaugrenelle: despite recent renovations, considerable difficulties in accommodating incoming flows during 6AM-10AM time window, too strict according to 9/31 retailers



Only access for incoming flows via narrow street and two gates, only left one used during observations



Three trucks unloading while others wait in street or on sidewalks

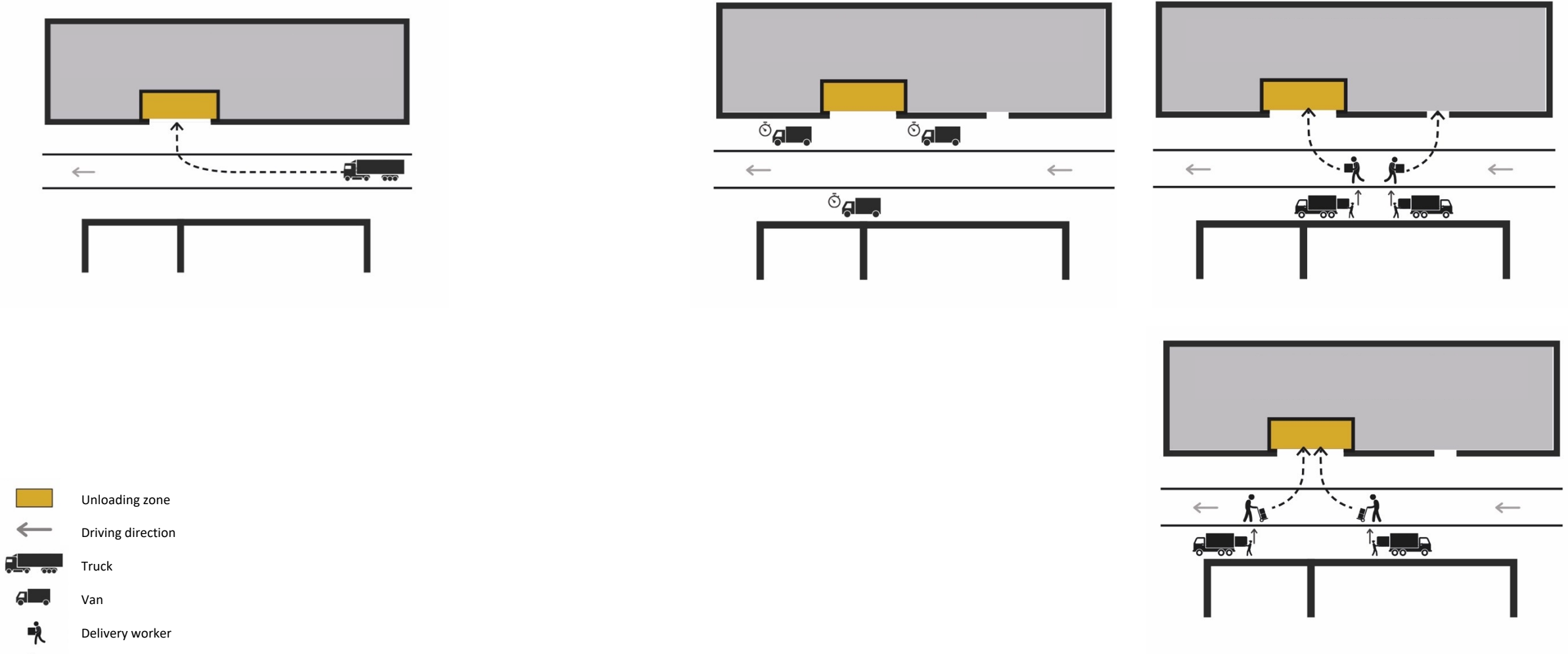


On street unloading activities to avoid delays, risking theft, fines and traffic obstruction



Delivery worker carrying boxes through main entrance

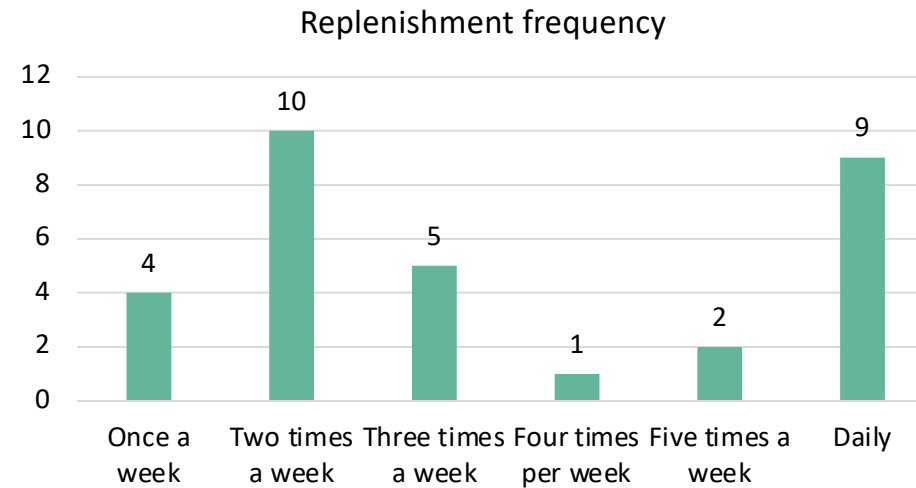
Beaugrenelle: from a theoretical model for incoming flows to three alternative practices



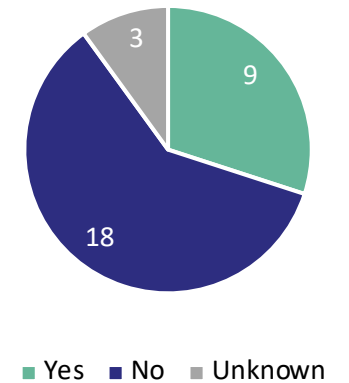
Beaugrenelle: storage space too limited according to 16/31 retailers, resort to renting additional space in or nearby shopping centre and frequent store replenishment, the majority unconsolidated



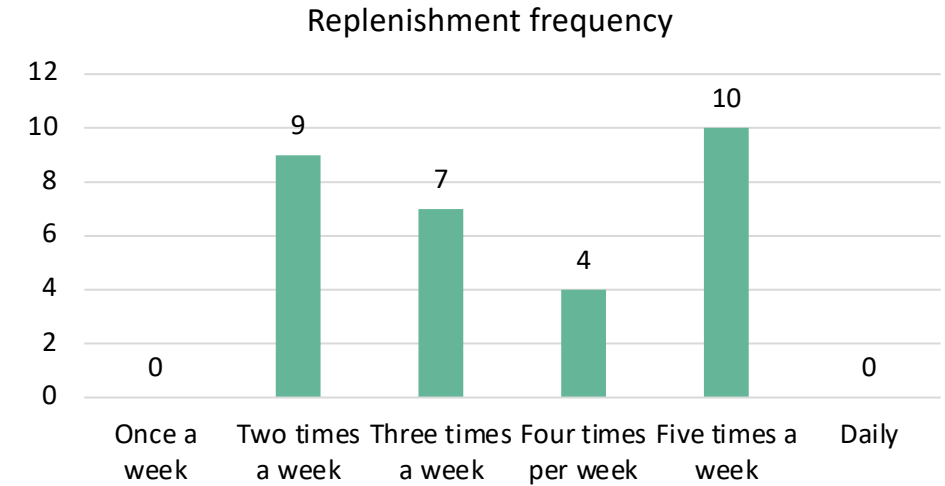
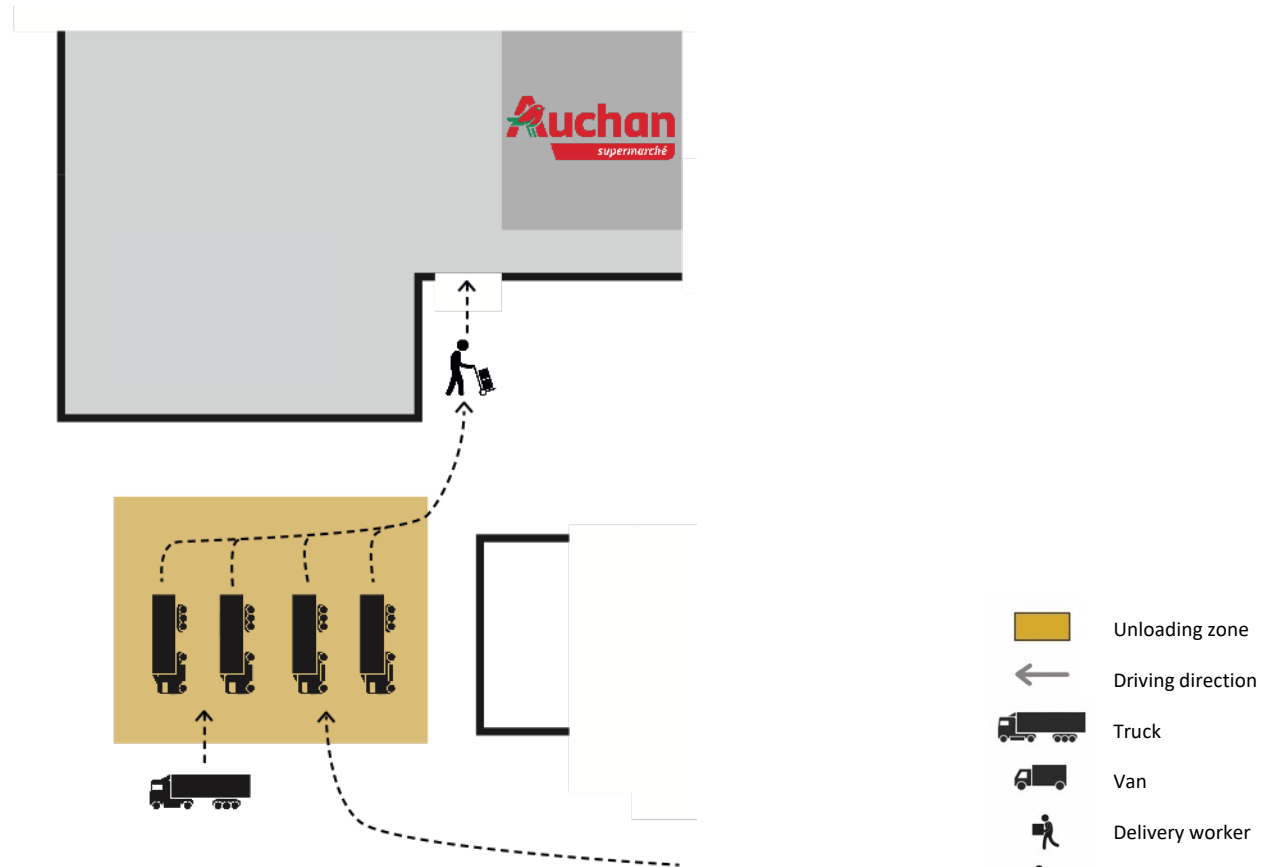
Storage in a retailer's fitting room.



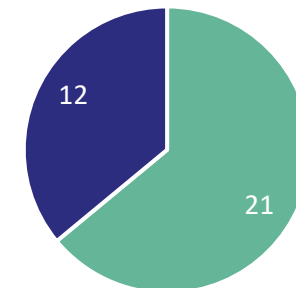
Consolidated deliveries



Val d'Europe: **less frequent and more consolidated** incoming flows, night deliveries and less dissatisfaction with storage space



Consolidated deliveries



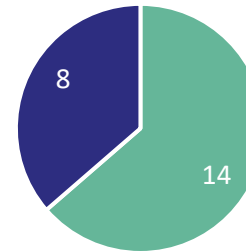
■ Yes ■ No

Omnichannel operations organised separately from store replenishment with specialised companies, for click-and-collect (although mostly storage) and ship-from-store (although little used)



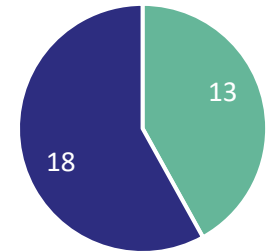
Worker carrying out a delivery for click-and-collect

Click-and-collect offer at Beaugrenelle



■ Yes ■ No

Ship-from-store offer at Beaugrenelle



■ Yes ■ No

Some concluding remarks...

- At shopping centre level, optimisations required for managing incoming and outgoing freight flows, especially urban
- At retailer level, optimisations required for managing omnichannel operations
- Brettmo and Sanchez-Diaz (2021) recommend collaboration, consolidation and optimisation initiatives
- Other concepts include “Common Logistics” (CITYLAB, 2018), “Shopping Fulfillment Center” (JLL Retail, 2018), urban consolidation centres (e.g., by URBV), shared storage areas (e.g., by Sogaris)