

Low-mobility, high-logistics? Transport implications of online shopping

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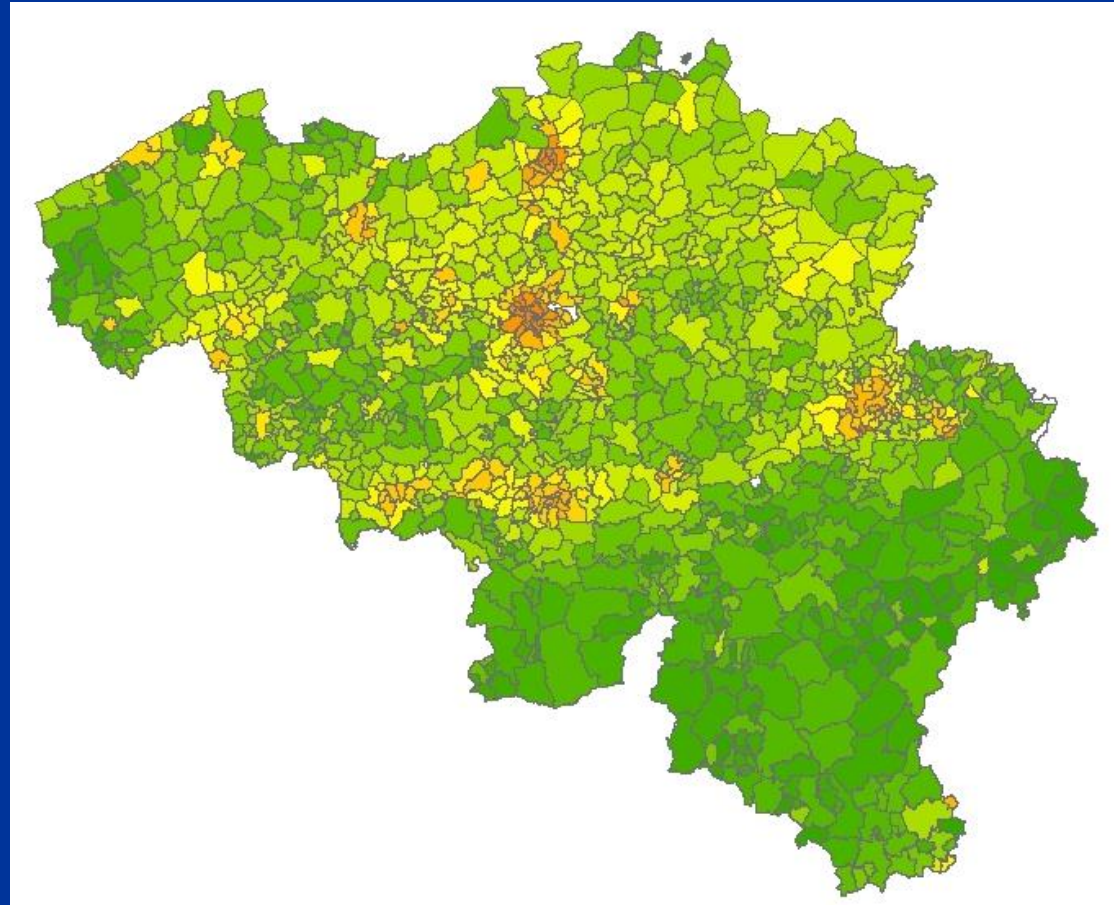
Assistant professor & senior fellow FWO

Mobilise research group

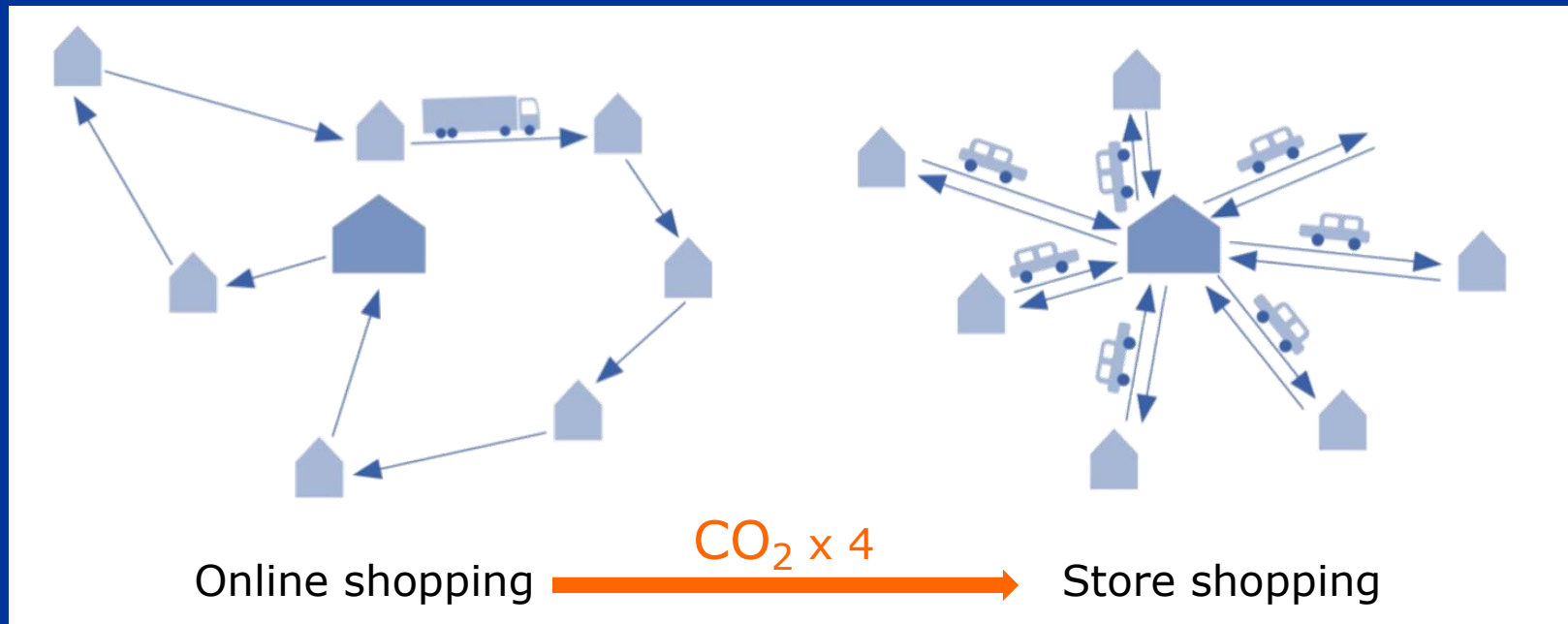
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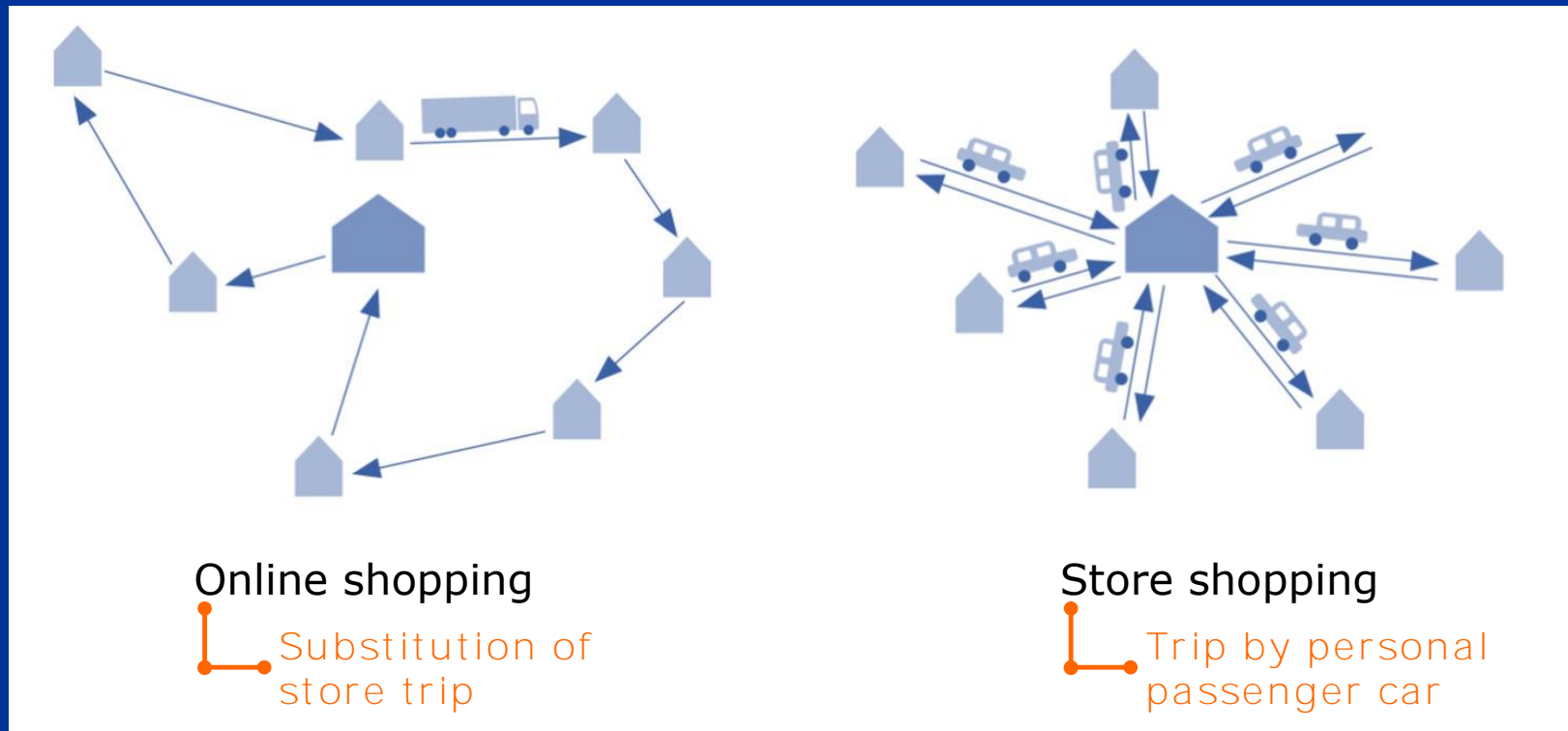
E-commerce in Belgium, +1 million daily parcels delivered across all areas



Online purchases' environmental impact tends to be lower than store purchases'



E-commerce has an environmental benefit only when two conditions are met



Does e-commerce logistics replace consumer mobility?



Omnichannel



Fragmentation

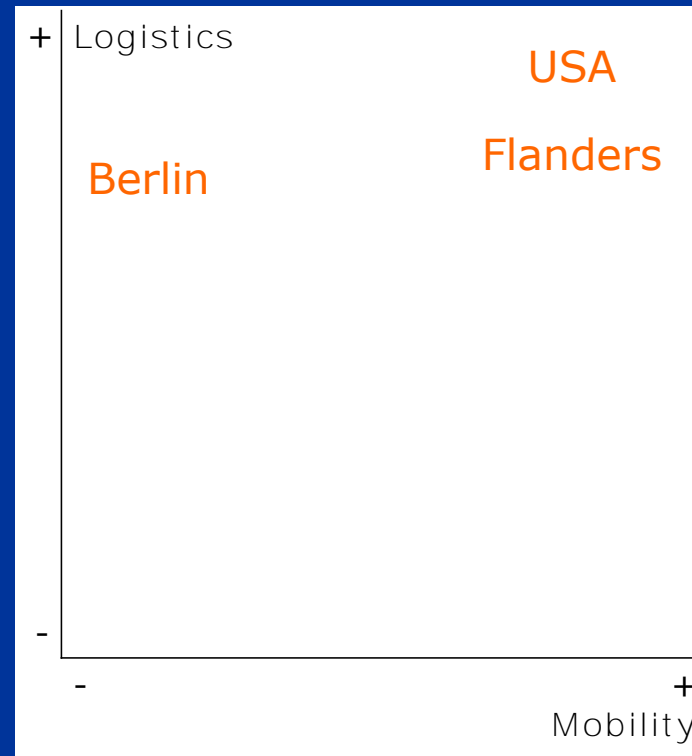


Travel demand



Shopping demand

Evidence on shopping mobility + logistics is scarce and conflicting



USA: active e-commerce households engage in more activities and travel more

	Monthly activities/travel compared to low frequency online shopping households for weekdays	
Online shopping frequency	medium	high
Number of shopping activities	2.05-2.22	2.29-2.42
Total miles traveled	57.24	53.00
Shopping miles	15.64	20.31

Berlin: consumers in car-reduced developments make more online purchases

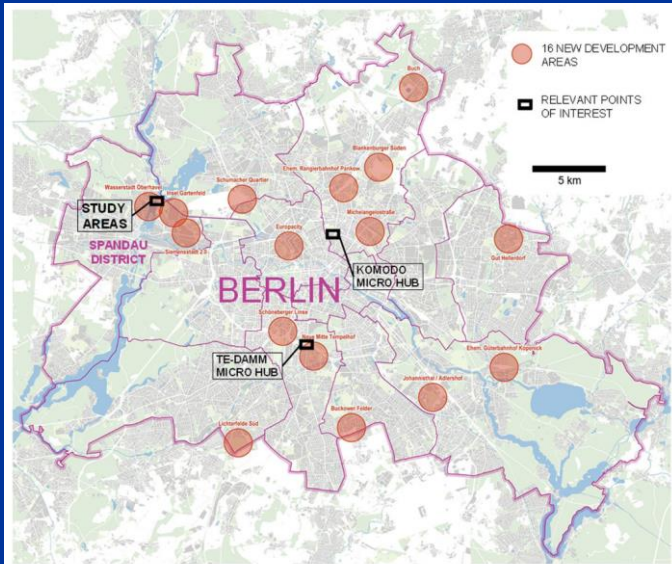


Fig. 1 Map of new residential development areas and relevant points of interest in Berlin (based on Berlin 2019, modified)

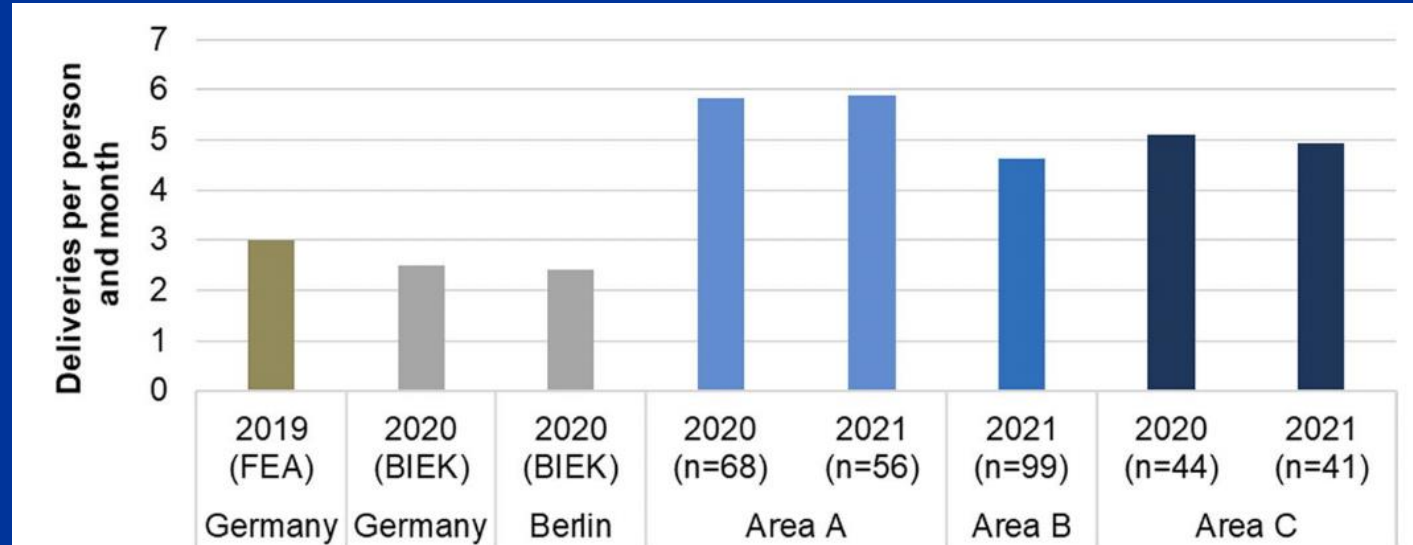
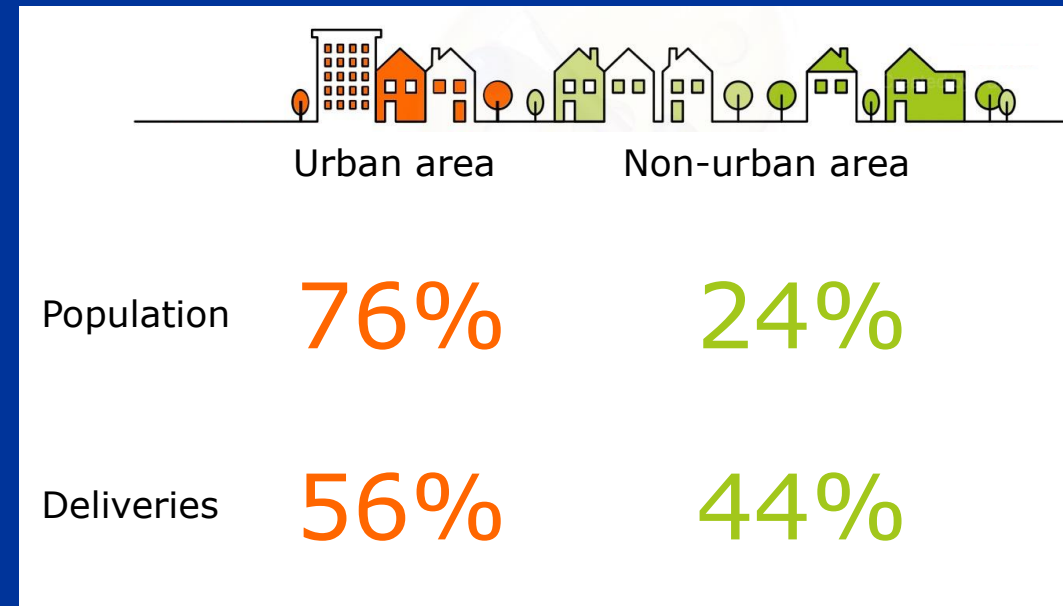
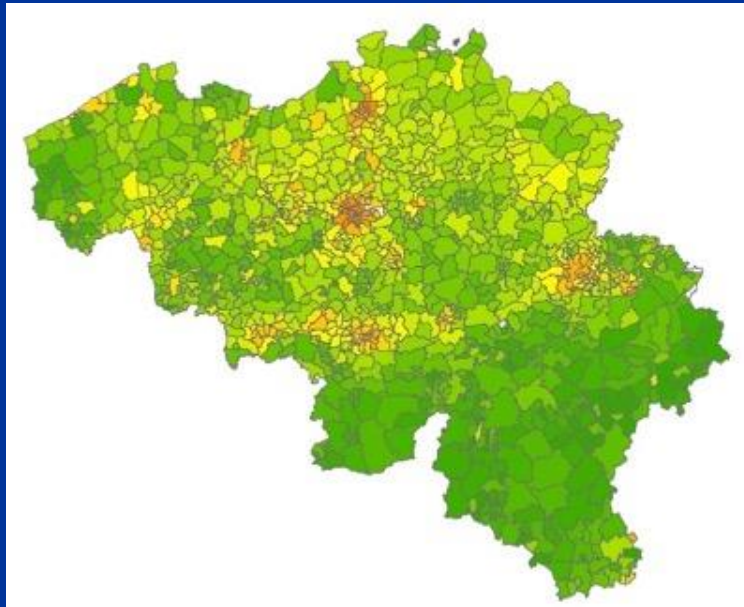


Fig. 5 Parcel volumes of the respondents

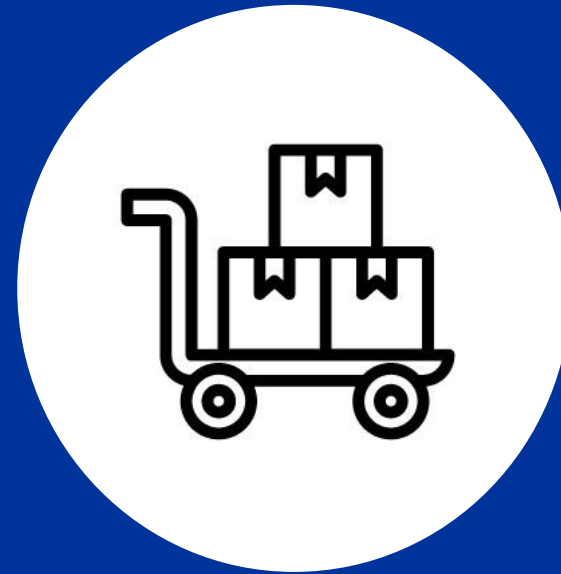
Flanders: non-urban consumers receive more than twice as many online purchases



Implications for urban logistics



Space for parking

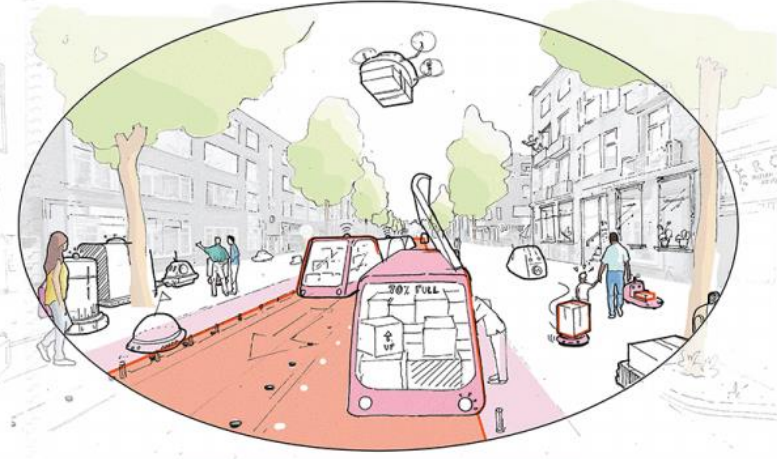


Space for (un)loading,
charging, crossdocking,
consolidating

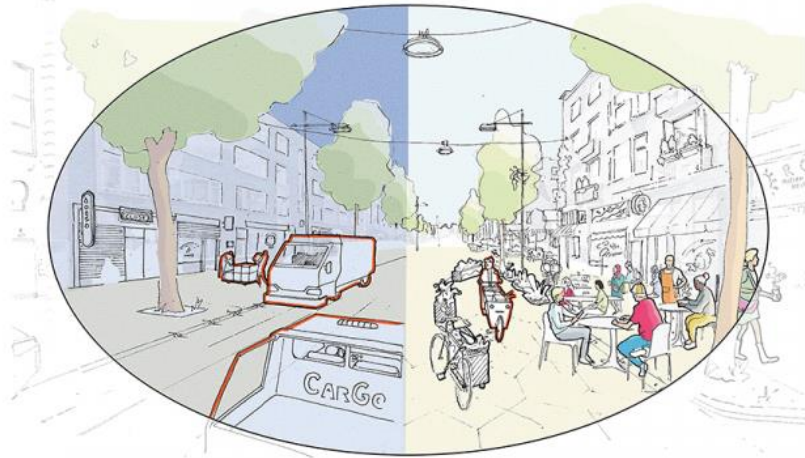
Implications for urban logistics



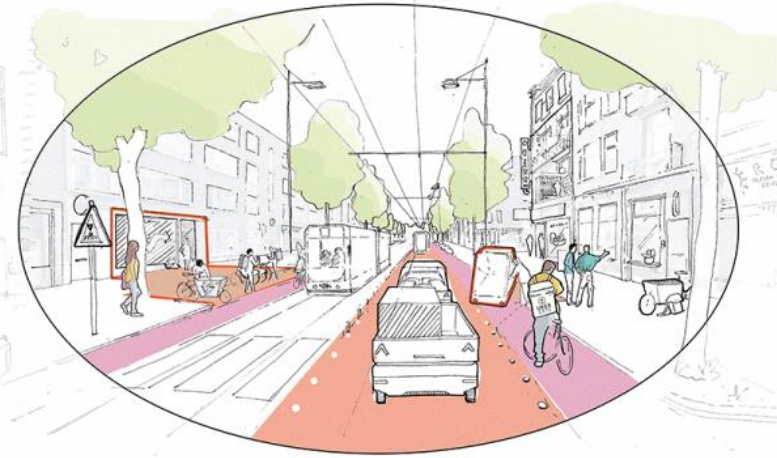
Scenario 1: Geïntegreerd logistiek systeem, stadsgerichte stedenbouw



Scenario 2: Geïntegreerd logistiek systeem, logistiek gerichte stedenbouw



Scenario 3: Gesegregeerd logistiek systeem, stadsgerichte stedenbouw



Scenario 4: Gesegregeerd logistiek systeem, logistiek gerichte stedenbouw

Thank you

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