

Developments shaping urban logistics and logistics professionals in the future

Future labor market for the sustainable and livable cities

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Developments shaping urban logistics and logistics professionals in the future

- 1. Introduction: logistics in cities
- 2. Drivers for change in city logistics system
- 3. Impacts on future logistics professionals

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City Logistics is defined as:

"the last leg in a supply chain to a customer location in a city, or the first leg from a customer location in a city back into the supply chain".



Source: Topsector Logistiek, Outlook City Logistics, 2017



Logistics in cities consists of six segments:



Source: Topsector Logistiek, Outlook City Logistics 2017 & 2020 (adapted)





Logistics in cities consists of six segments:



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Logistics in cities consists of six segments:

General cargo

large retail chains



small and independent stores



home deliveries



Temperature Controlled

supermarkets



wholesalers

specialists



home deliveries



Source: Topsector Logistiek, Outlook City Logistics 2017 & 2020 (adapted)

Parcels and Express









Facility Logistics









Waste logistics

home (concession)





business



Construction

civil engineering (GWW)



new-build homes and offices



renovation



- Efficient logistics system is essential for functioning of city
- Logistics often recognized for *negative effects*



Source: Logistiek.nl





Based on 2015 measurements: since then, the truck fleet has been updated with Euro VI trucks. Up-to-date data is currently lacking, but Euro VI trucks emit less NOx (although at urban speeds measured NOx emissions are higher than used emission factors) than EURO V engines. This suggests that the proportion of NOx emissions from trucks will be lower than in 2015.

TNO: Rotterdam City Centre, 2015

1. Sustainability

- climate agreement and • decarbonization
- local air quality •

Zero emission zones and electrification of vehicles









2. Change in retail landscape and developing last mile logistics system

- Change from store deliveries (trucks) to home deliveries (vans)
- Logistics more visible in neighborhoods
- Lockers
- More vans (parcels) and bike couriers (food)
- Other deliveries to centers







3. Less urban space available for logistics (densification)

- Less space for logistics and motorized trucks / vans
- Need for bundling logistics (hubs) nearby cities



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concepten



4. Digitization and digitalization logistics opportunities from the smart city

- Self-organizing logistics (local / decentral decision making)
- Physical Internet









5. Automation and robotization

- Autonomous delivery robots
- Automatic vehicles



ATTENTION

Autonomous delivery robot pilot



GIVE SPACE







mpacts on future logistics professionals								
	Shipper		Transporter /LSP		Receiver		Authority	
1. Sustainability			Electrification fleet Planning				Regulation and enforcement	
2. Change in retail landscap	Online strategy – reaching the receiver	lopi	'Flexible' drivers (bikes / vans) Platforms	e log	gistics syste	em		
3. Less urban space availabl	e for logisti	cs ((Collaboration in last mile More planning restrictions	n)			Spatial planning for logistics	
4. Digitization and digitaliza	ation logisti	CS	AI / SOL planning					
5. Automation and robotiza	tion		Handling deliveries Autonomous decisions				Regulating	



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Thank you!

Do you have any question?

Ask Hans Quak, quak.h@buas.nl



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