



## CROWD LOGISTICS

CITYLAB, 28 March 2018  
VIL – VUB MOBI

# Crowd Logistics

With Crowd Logistics, private individuals or semi-professionals are used to transport goods. What business models can apply to this? What are the legal implications? How can this be integrated into business logistics and what is its added value, both for logistical actors and for society in general?



**status:** Closed | **thema:** digitalization, omni-channel-en | **type:** regional

## DELIVERY BY PRIVATE INDIVIDUALS

With Crowd Logistics, ordinary citizens – individually or collectively – organize the shipping of parcels in the course of their normal movements. A technological platform is generally used for this.

This new trend should not be ignored. The first pilot projects have already been set up abroad, by new actors (e.g. Uber Rush – US, Instacart – US, Parcify – B) and established companies (e.g. [My Ways](#) from DHL, [On My Way](#) from Amazon).

## OPPORTUNITIES?

The aim of this project is to demonstrate to companies the opportunities – rather than the threats – of crowd logistics by clearly revealing the economic and social impact based on workable business models. This will be achieved through concrete calculations of return on investment, impact analyses and practical testing.

## FROM INSIGHT TO PILOT PROJECTS

What exactly is planned?

1. To give an insight into the new trend emerging in the sector. Traditional businesses (DHL, Amazon), disruptive businesses (Uber) and new start-ups (Instacart) are all taking their first steps in this area. An overview will be provided of what is happening in the market.
2. To outline the legal framework, with particular attention to the aspect of product responsibility.
3. To define crowd-based applications and describe the underlying business models. Logistics companies, retailers and service providers are all launching new services based on crowd logistics, for both B2C and B2B. What do these various business models look like?
4. To calculate the economic feasibility (ROI) of the business models.
5. More extensive impact analysis on all stakeholders in the supply chain for B2C and B2B (smaller quantities). To this end, a multi-actor multi-criteria analysis will be performed on the economically feasible business models.
6. Set up a pilot project for both B2C and B2B applications to validate the economic and social impact.



**SHARING ECONOMY LOGISTICS**

Rethinking logistics with access over ownership

May 2017

Powered by DHL Trend Research

## Projectpartner:



## Participants:



# The future of CrowdShipping?

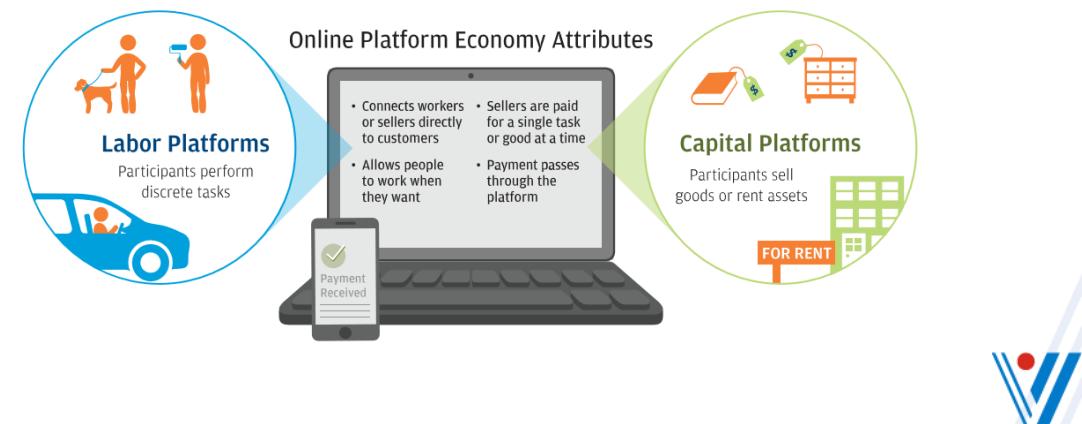


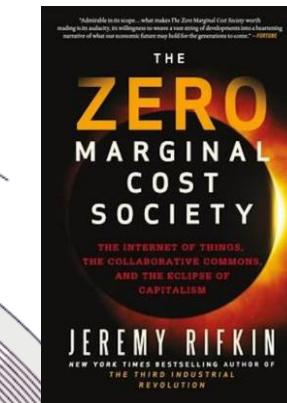
**Crowdsourcing** may not play a significant role in instant delivery, despite easing the ability of companies to cope better with fluctuating demand, to leverage resources for different uses (e.g., parcel delivery and taxi services), and to get access to cheaper, less regulated labor – since almost anyone can drive a cab or deliver parcels.

This slide from the European Parliament discusses the cost of non-Europe in the sharing economy. It features the European Parliament logo at the top left. The main title is 'The Cost of Non-Europe in the Sharing Economy' with a subtitle 'Economic, Social and Legal Challenges and Opportunities'. Above the title, there's a banner with the text 'The collaborative economy' and 'An opportunity – for citizens and entrepreneurs'. Below the banner, there are icons representing a computer monitor with a sofa, a smartphone with a car, and two people talking, with speech bubbles asking 'Tax?' and 'Employment?'. A red 'vs' symbol is positioned between the two main sections of the slide.

		Increasing drop density/decreasing cost		
Overarching product categories		Rural areas with low to average density <sup>2</sup>	Urban areas with average density <sup>3</sup>	Urban areas with high density <sup>4</sup>
X2C	Regular Parcel <sup>1</sup>	AGV's WITH LOCKERS		
	High reliability, e.g., time window	DROONES		
	Same Day			
	Instant	FULFILLMENT LIKELY NOT POSSIBLE AT ECONOMICAL COST LEVELS		BIKE COURIERS OR DROIDS
B2B		TODAY'S DELIVERY MODEL		

ref. McKinsey&Company, 2016  
1. Between D+1 and D+4    2. Below 50,000 inhabitants    3. 50,000 – 1million inhabitants    4. Above 1 million inhabitants



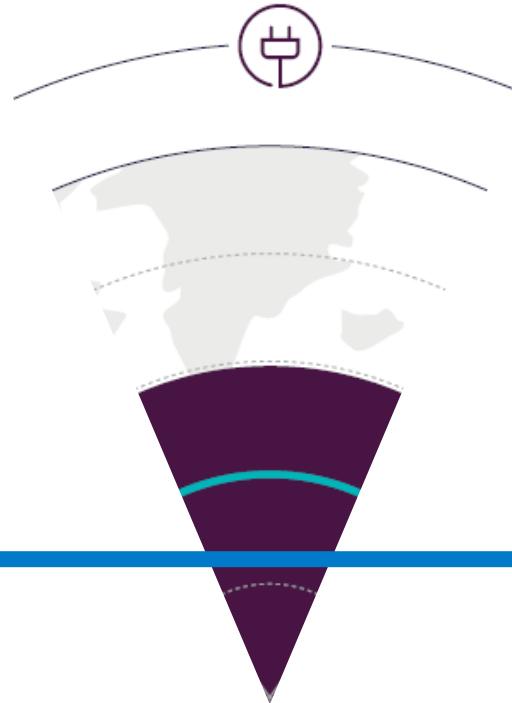


Profit driven



Socially driven





Profit driven

Socially driven



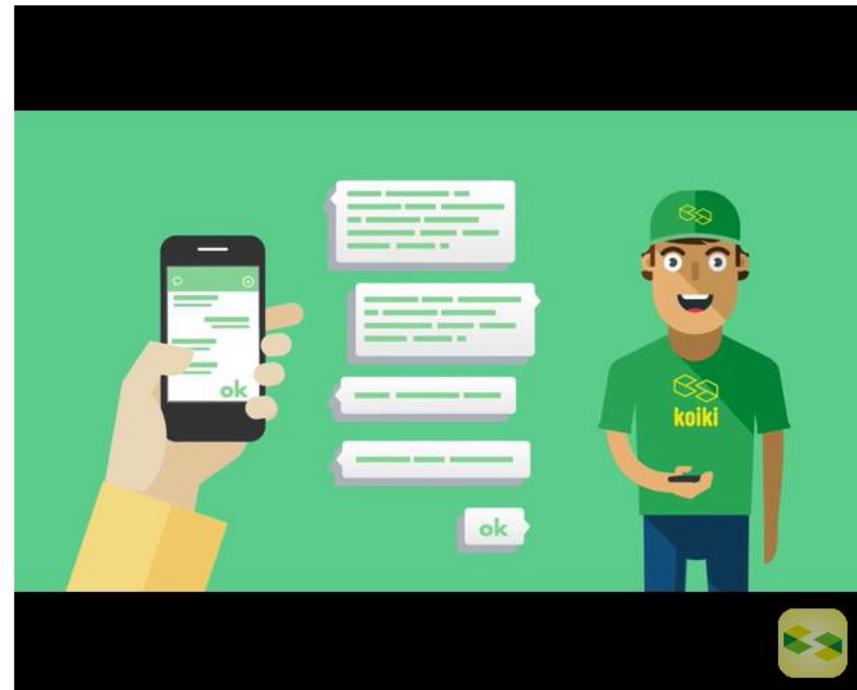
FOR THE TIME BEING WE HAVE SAVED:

**2.750**

CO<sub>2</sub> KILOGRAMS

## YOUR DELIVERY

- ❖ Once Registered **you will find out** the Koikis that work in you neighborhood, who you might already know.
- ❖ When you shop online, ship to your personal **Koiki shipping address**.
- ❖ You will get notified when your Koiki receives your parcel and you will decide **the exact time** you want it at your home.
- ❖ **Price for this service is 1,85 €**

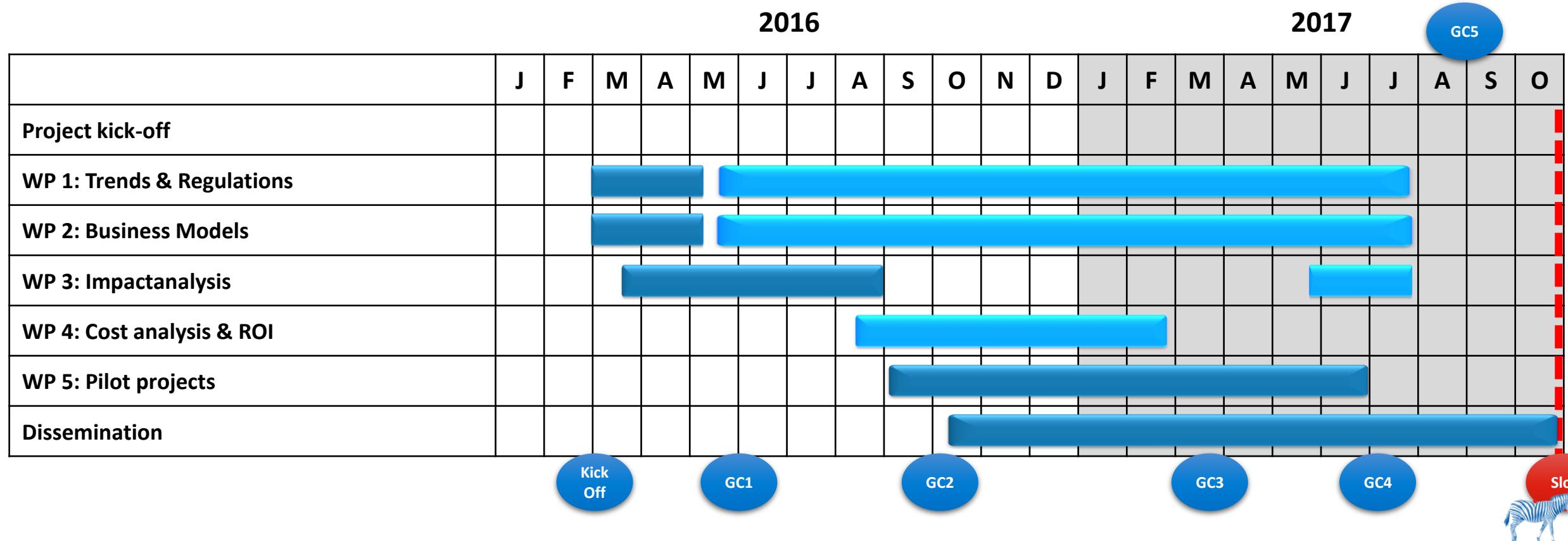


I WANT TO HIRE A KOIKI!!

## YOUR SHIPPING

- ❖ **If you want to ship** parcels or letters, contact your Koiki in your neighborhood.
- ❖ **He will pick it up at your home** and he send it thru the post or any express company.
- ❖ You will be informed about **the status** of your shipment at any time.
- ❖ **Price for this service is of 7,85€** within mainland Spain (up to 5kgs)

# Planning



Juni 2016



parcify

## CROWD LOGISTICS

GC1 – 14/06/2016



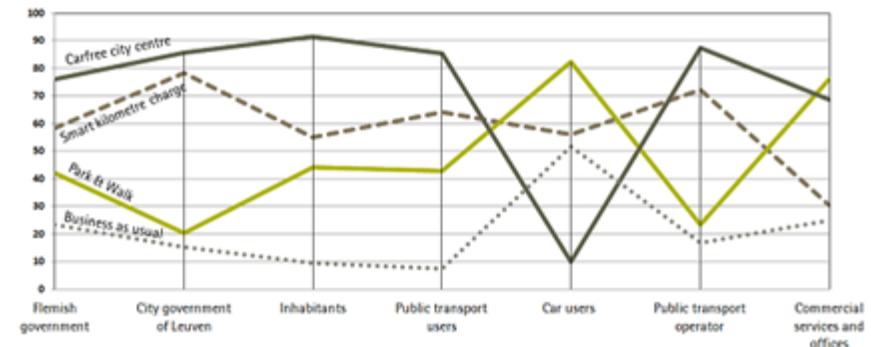
**Bringme** ● ● ●  
Get it. Send it. Love it.

By Jeremiah Owyang  
jeremiah@CrowdCompanies.com  
©J. Owyang, March 2016



## Multi Actor Multi Criteria Analyse (MAMCA)

Preferences of sustainable mobility scenarios in a city centre (case study)



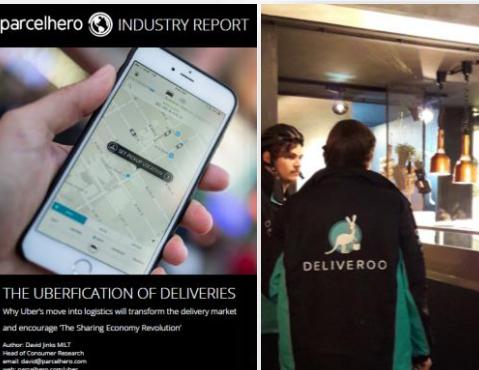
⇒ Comprehensive and coordinated vision on complex decisions

Vrije Universiteit Brussel - MOBI

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## SCENARIO'S

Scenario	Bestaand concept
1 Business marktplaats platform	<b>Mix Move Match</b> Transform Your Supply Chain and Radically Reduce Costs and Carbon Footprint
2 Community marktplaats platform	<b>MYWAYS</b>
3 Flex-werk platform	<b>POSTMATES</b>
4 Opdrachtgever platform	<b>Walmart</b>
5 Logistieke dienstverlening platform	<b>koiki</b>





instacart

Groceries delivered in 1 hour

Enter your zip code to see your local stores

## No Car? No Problem

## Car Required

### Shopper

PART-TIME EMPLOYEE

Shop for grocery orders in local stores.

- Shopping only
- No vehicle required
- Flexible schedule
- Work up to 29 hrs/wk

### Cashier

PART-TIME EMPLOYEE

Work the cash register to check out orders

- Check-out only
- No vehicle required
- Flexible schedule
- Work up to 29 hrs/wk

### Driver

INDEPENDENT CONTRACTOR

Deliver groceries from local stores to customers.

- Delivery only
- Vehicle required
- Flexible schedule
- Work unlimited hours

### Driver + Shopper

INDEPENDENT CONTRACTOR

Shop for groceries and deliver them to customers

- Delivery and shopping
- Vehicle required
- Flexible schedule
- Work unlimited hours



Oct. 2016



## CROWD LOGISTICS

GC2 – 05/10/2016



KNOW  
APPLY  
GROW



## CONCEPTNOTA AAN DE VLAAMSE REGERING

Betreft: Clusterbeleid

### 1. Beleidscontext

In het Vlaams Regeerakkoord 2015-2019 is afgesproken:

"Via een gericht clusterbeleid dat ondernemersgedreven is (entrepreneurial discovery) versnellen we de transformatie van ons economisch weefsel en versterken we het kennisgedreven karakter van de economie. We maken duidelijke keuzes voor specifieke sectoren en clusters die aansluiten bij de sterken van de Vlaamse industrie en de kennisinstellingen en waarmee we internationaal het verschil kunnen maken."

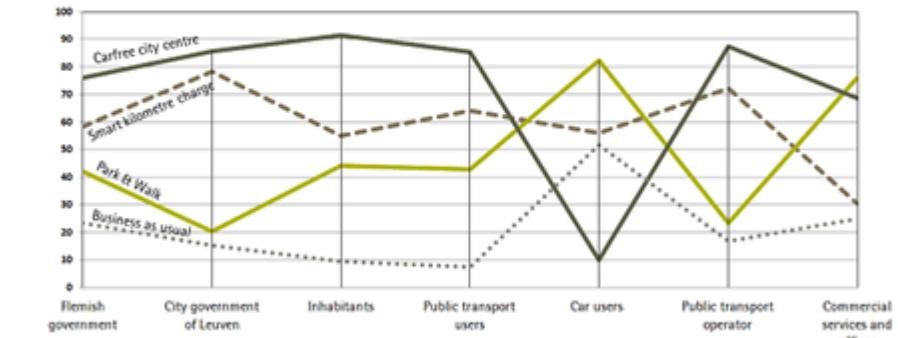
## Belastingregime deeleconomie andermaal uitgesteld

Het specifieke belastingregime voor wie wat bijklust en zijn diensten aanbiedt via een onlineplatform, is andermaal uitgesteld. De regeling zou ten vroegste in oktober, mogelijk pas in november ingaan. Dat meldt de voorvoerder van de minister van Financiën Johan Van Overtveldt (N-VA).

## Multi Actor Multi Criteria Analyse (MAMCA)

### Resultaten

Preferences of sustainable mobility scenarios in a city centre (case study)



⇒ Comprehensive and coordinated vision on complex decisions

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Feb. 2017

GC3 CROWD LOGISTIEK

22 februari 2017



### Ontwerp van Programmawet van 2 juni 2016 (De Croo)

KBs 12 januari 2017 verschenen in het Staatsblad van 20 en 24 januari 2017

De contactpersoon bij FOD Economie mbt deeleconomie is

Pascal Vanderbecq – Kabinetschef FOD Economie

Voortuiggangstraat 50, Brussel

+32 (0) 2.227.82.95

+32 (0) 497.51.64.30

SB: 20 januari 2017

12 JANUARI 2017. — Koninklijk besluit tot bepaling van de bedrijfsvoorheffing op de inkomsten zoals bedoeld in artikel 90, eerste lid, 1<sup>er</sup>, van het Wetboek van de inkomstenbelastingen 1992 (1).

SB: 24 januari 2017

12 JANUARI 2017. — Koninklijk besluit tot uitvoering van artikel 90, tweede lid, van het Wetboek van de inkomstenbelastingen 1992, inzake voorheffing tot behandeling in dekenale plenaire vergaderingen van deeleconomie en tot onderwijping van de in artikel 90, eerste lid, 1<sup>er</sup>, van het Wetboek van de inkomstenbelastingen 1992 vermelde inkomsten aan de bedrijfsvoorheffing (1).

19



Jun. 2017



## GC4 CROWD LOGISTIEK

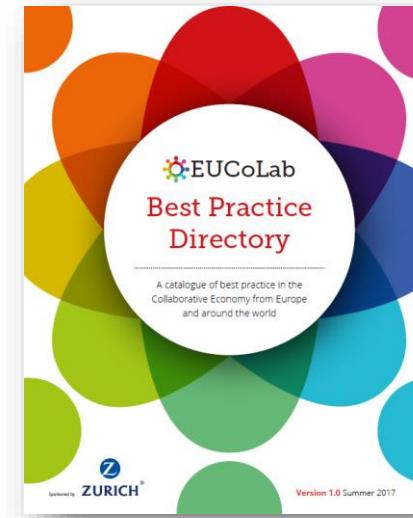
VIL, 08 juni 2017

KBO-nr.	Naam	Website	Datum van inwerkingtreding van de erkenning
0503.832.450	ListMinut	<a href="http://www.listminut.be">www.listminut.be</a>	01.03.2017
0645.596.990	FLAVR	<a href="http://www.flavr.be">www.flavr.be</a>	01.03.2017
0663.983.212	Conceptz	<a href="http://www.klaarkees.be">www.klaarkees.be</a>	10.03.2017
0214.596.464	bpost	<a href="http://www.bringr.be">www.bringr.be</a>	01.03.2017
0662.444.078	Heetch Belgium	<a href="http://www.heetch.com/be">www.heetch.com/be</a>	01.04.2017
0665.814.730	Pwic	<a href="http://www.pwic.com">www.pwic.com</a>	15.03.2017
0645.829.364	Menu Next Door Limited	<a href="http://www.menunextdoor.be">www.menunextdoor.be</a>	01.04.2017
0668.638.519	BRANPONT	<a href="http://www.biilesherent.be">www.biilesherent.be</a>	15.03.2017
0400.523.292	Daoust	<a href="http://www.daiobs.be">www.daiobs.be</a>	01.04.2017
0666.835.111	Your private butler	<a href="http://www.yourprivatebutler.com">www.yourprivatebutler.com</a>	03.04.2017
NL856287386B01 (N° TVA)	Uber Portier BV	<a href="http://www.ubereats.com">www.ubereats.com</a>	01.03.2017
0882.782.152	MY SHERPA	<a href="http://www.mysherpa.be">www.mysherpa.be</a>	01.05.2017

### Nieuw voorgesteld model

Loon	£ -		
Commissie	£ 3.75		
Orders per uur	3		
Aantal piekuren	6		
Fee per levering	2.5		
Gemiddeld order	30		
Fee op order	10%		
Aantal dagen per week		18	
Aantal maanden per jaar			12
			3500
			5000

	Dag	Maand	Jaar
<b>Omzet</b>	£ 99.00	£ 1,782.00	£ 21,384.00
Delivery Fee	£ 45.00	£ 810.00	£ 9,720.00
Commission Fee	£ 54.00	£ 972.00	£ 11,664.00
<b>Cost</b>	<b>£ 217.50</b>	<b>£ 1,365.00</b>	<b>£ 14,730.00</b>
Uurloon	£ -	£ -	£ -
Commissie per order	£ 67.50	£ 1,215.00	£ 14,580.00
Materiaal	£ 150.00	£ 150.00	£ 150.00
<b>Winst</b>	<b>-£118.50</b>	<b>£ 417.00</b>	<b>£ 6,654.00</b>
Marge	-119.7%	23.4%	31.1%
<b>Totale Operationele Winst</b>	<b>£ 23,289,000.00</b>		



News Digital 01.jun.2017

### European court may force Uber out of Europe

A key decision awaits the Court of Justice of the European Union (CJEU). Will the Court's judges side with the opponents of sharing services such as Uber, or will they instead support their further development? EURACTIV Czech Republic's partner Aktuálně reports.

### DETAILS OPHALING

- dinsdag 1 augustus tussen 10:00 & 14:00
- KONINKLIJKELAAN 76 - 2600 ANTWERPEN
- Vragen naar Jan Mercx

### DETAILS LEVERING

- dinsdag 1 augustus tussen 16:00 & 22:00
- RUE DE MAZY 123 - 5030 GEMBLOUX
- Vragen naar Etienne Hilson (+32495113385)
- Believe af te spreken met Mr. Hilson om zeker te zijn dat hij thuis is.

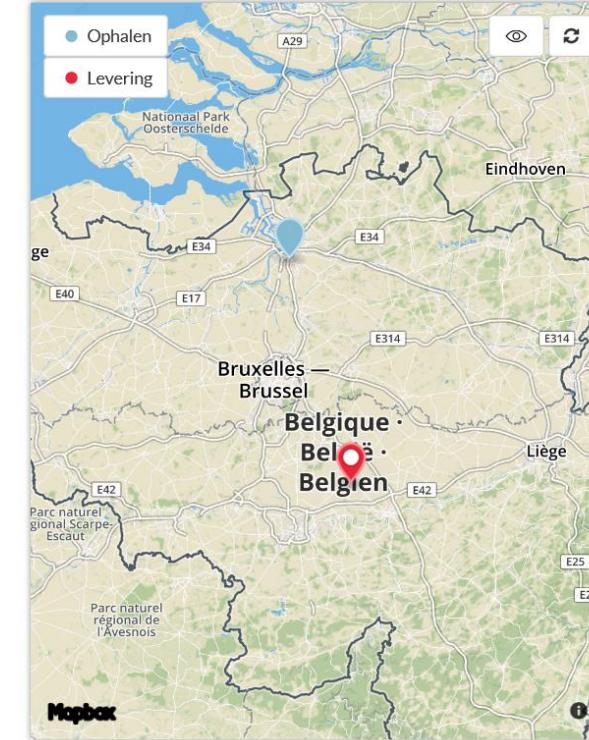
### OVER HET PAKJE

Bongo bon

### TOTAALPRIJS

€ 26,47

ONTHAAL/VOD



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# Crowd logistics

## Environmental impact analysis

Sharing Economy Logistics: Access Over Ownership

Heleen Buldeo Rai, Sara Verlinde & Cathy Macharis  
Vrije Universiteit Brussel, MOBI

# Context

Positive impact on economy, society and environment?







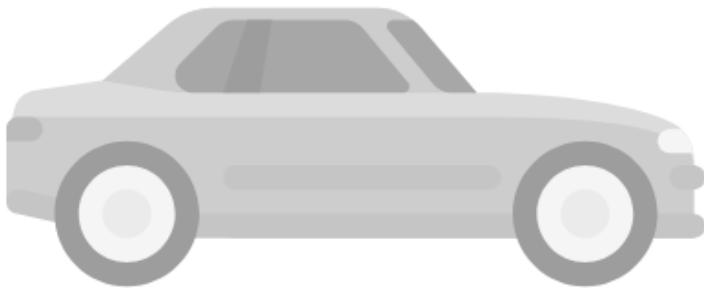
## Method

Calculation of the negative side-effects of transportation in monetary values (external cost calculation), to determine the **environmental impact**

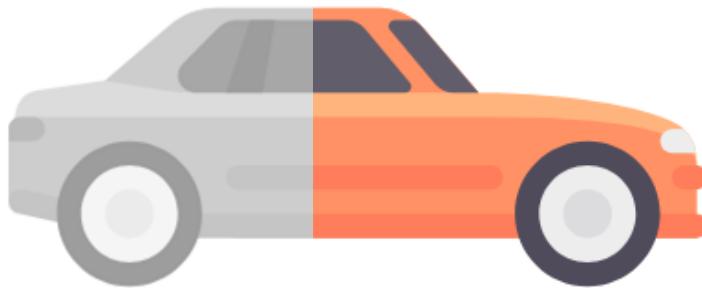
## Method

- ▶ Platform-generated data from June 2016 until July 2017, 2000 transactions stored in a database
- ▶ Survey results in May 2017: survey question to the crowd, addressing the nature of their last parcel delivery trip

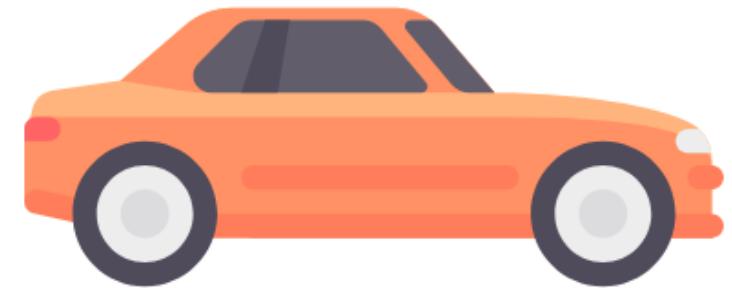
# Method



15%



32,50%



52,50%

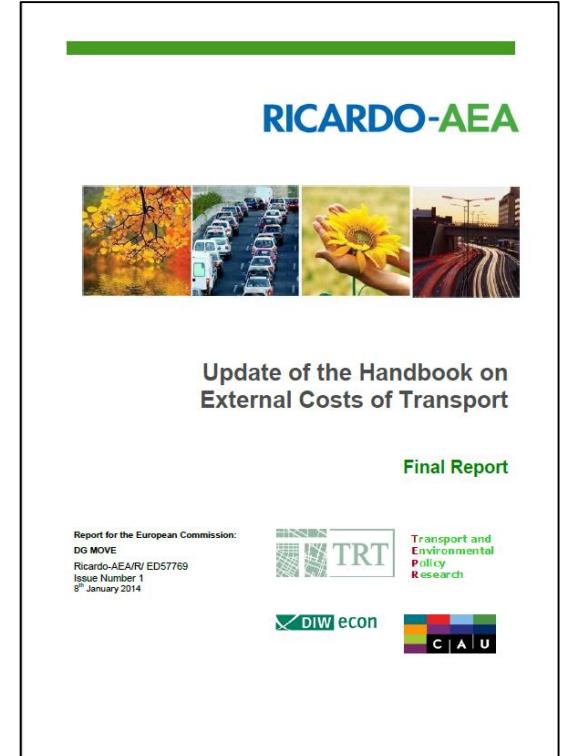
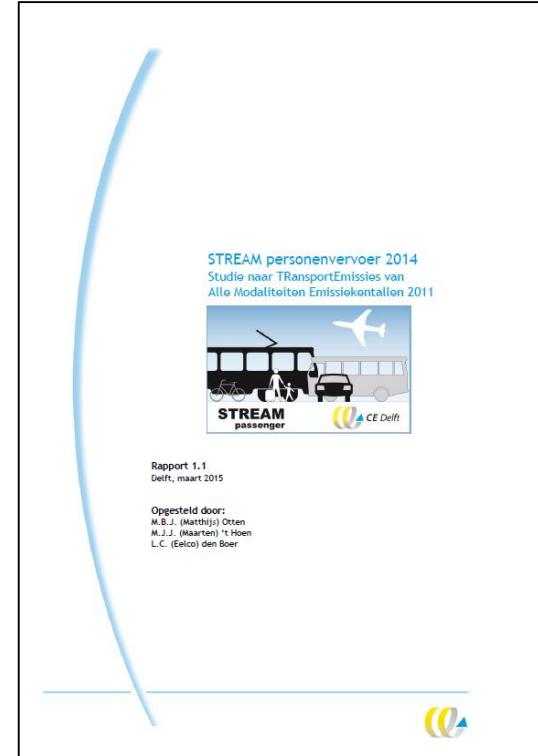
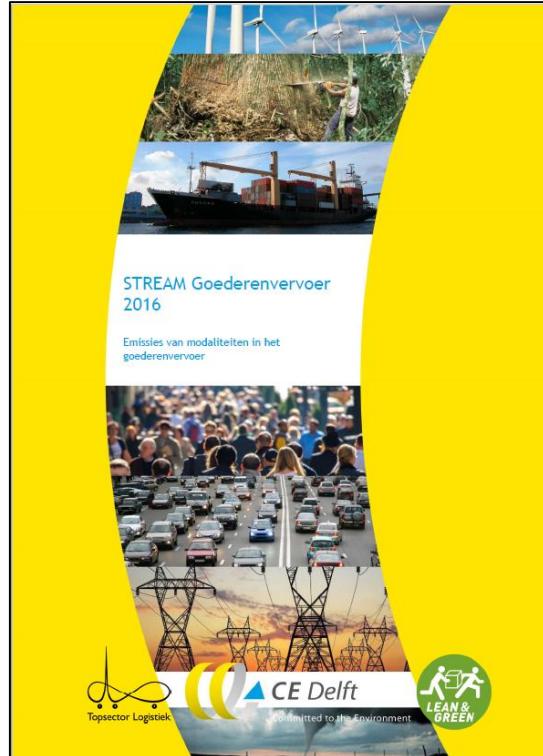
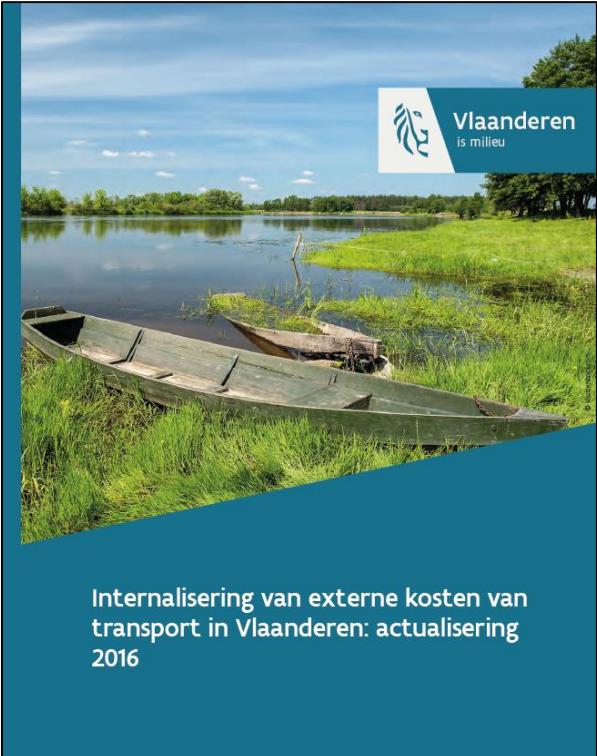
n=80

23

## Method

- ▶ Climate change emissions
- ▶ Air polluting emissions
- ▶ Noise
- ▶ Accidents
- ▶ Congestion

# Method



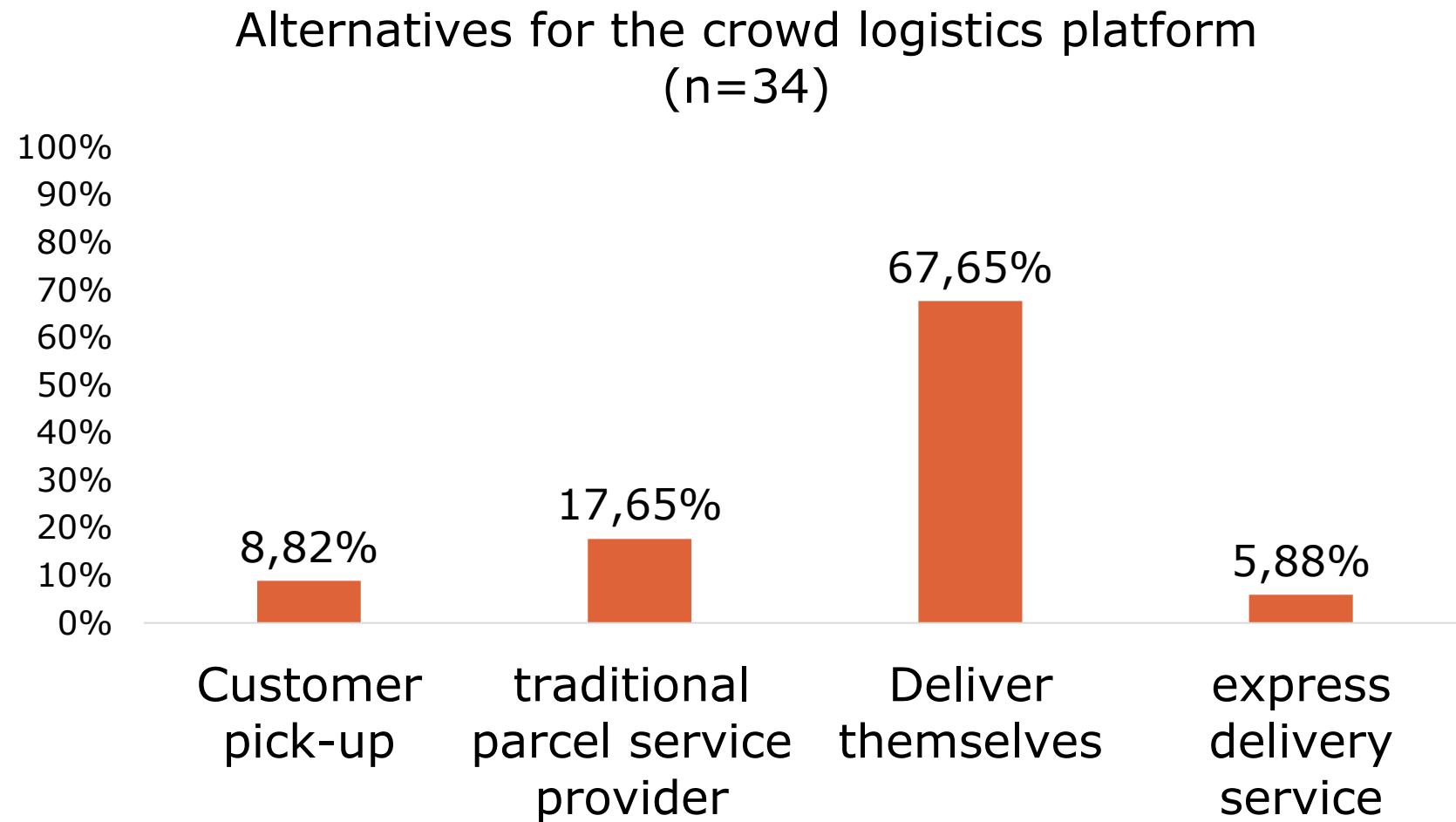
# Method

Reference scenarios:

- 1) Crowd logistics
- 2) BAU 1 is based on a parcel route of a traditional logistics service provider
- 3) BAU 2 is based on a survey question to the commissioners, addressing how they would have send their parcel if the crowd logistics platform was not available

# Method

## Reference scenarios:



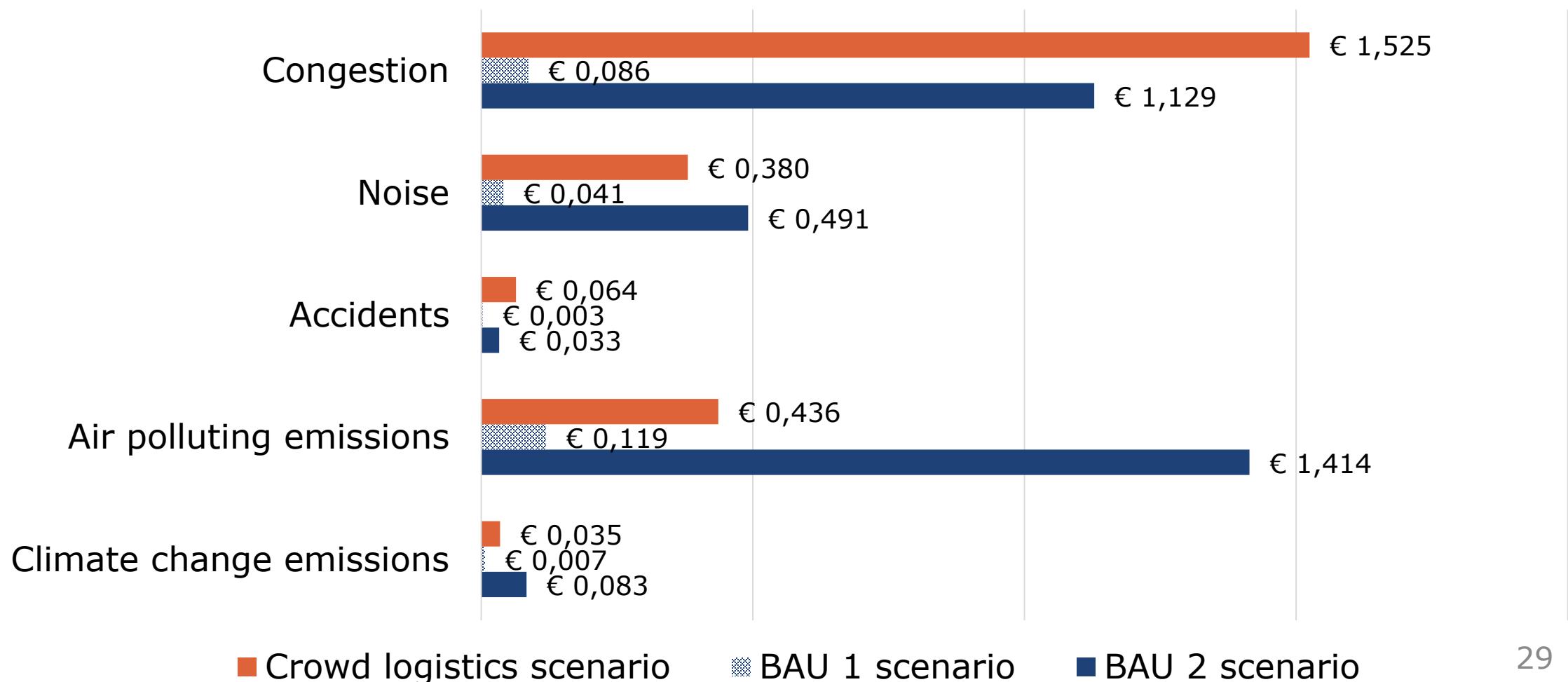
# Method

Reference scenarios:



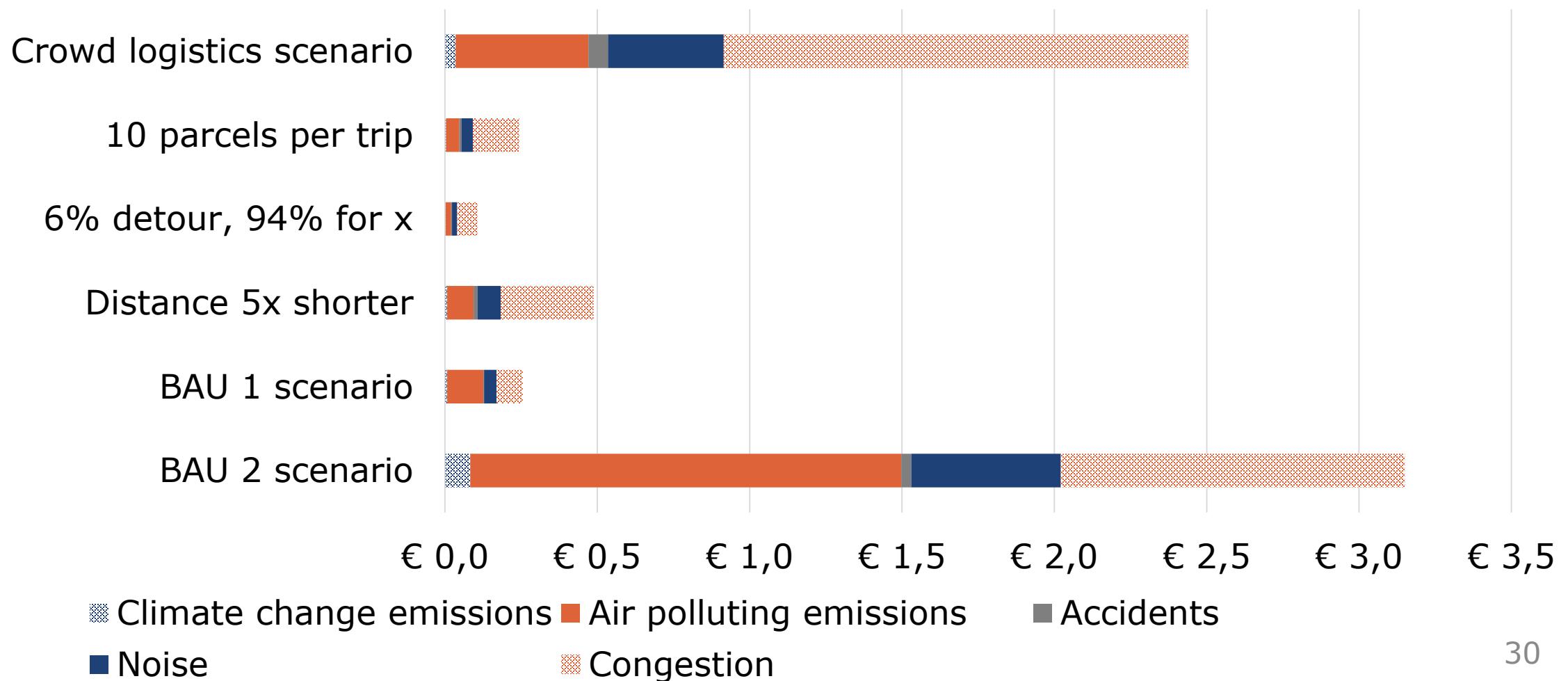
# Results

## External cost calculation per parcel



# Results

## External cost calculation per parcel



# Conclusion





## Heleen Buldeo Rai

+32 2 629 22 85

[heleen.buldeo.rai@vub.be](mailto:heleen.buldeo.rai@vub.be)



## Dr. Sara Verlinde

+32 2 629 24 11

[sara.verlinde@vub.be](mailto:sara.verlinde@vub.be)



## Prof. dr. Cathy Macharis

+32 2 629 22 86

[cathy.macharis@vub.be](mailto:cathy.macharis@vub.be)



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