mobil.TUM 2024: The Future of Mobility and Urban Space
April 10 -12, 2024, Munich
Technical University of Munich

Unlocking Cargo Bikes' Potential for Sustainable Mobility and Logistics in the Brussels Capital Region

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CONTEXT AND RESEARCH GAP

-E-cargo bikes as innovative solution to overcome regular bike's lack of load capacity compared to vans or cars (Carracedo and Mostofi, 2022).
-Gained significant attention with the proliferation of city's traffic restrictive strategies (e.g. low emission zones).
-Recent deployment of studies focusing on delivery trips, e-commerce and companies' adoption process (Narayanan and Antoniou, 2022).
-Research gap on the different cargo bike users' profiles beyond cycle logistics and their adoption process, including private mobility and shared cargo bike scheme users.

CASE STUDY: Brussels Capital Region (BCR)

EU-funded CAIRGO BIKE project (2020-2023)

Mobilise VUB task: Monitoring and evaluating the impact of a multi-stakeholder 3-step approach to create a cargo bike culture in the BCR for professionals and citizens

1 CONVERT THE UNDECIDED	2 EASE ACCESS AND USE	3 FACILITATE PARKING
Through training and free cargo bike trials	Through accessible shared CB services, bike trailer lending and monetary incentives	Offering public and private CB parking facilities

Figure 2: CAIRGO BIKE project partners with tasks (own authorship)

METHODOLOGY AND MATERIAL

Based on quantitative and qualitative data collection via **surveys** on the participants of the different project partners' pilot projects and strategies.

#	Surveys	Amount	Number of respondents
1	Pro Velo	4	739
2	Urbike	3	237
3	Bruxelles Environment	2	102
4	Bruxelles Economie et Emploi	1	206
5	Remorquable	1	872
6	Cambio	1	935
7	Parking.brussels	1	829
8	BePark	2	NA
	TOTAL	15	3920

Figure 1: Surveys deployed during the CAIRGO BIKE project (own authorship)

CONCLUSIONS

- Great **variety** of profiles among cargo bike interested users and actual users.
- Main **barriers** to CB usage: CB's price, fear of theft and lack of safe parking places.
- Major **motivators** for using CB are time-saving, cost savings, ease of use, flexibility, health improvement, and fun factors.
- **Personal factors** facilitating CB's **adoption**: previous bike culture and knowledge, strong environmental concerns, and curiosity about the cargo bikes' advantages
- **External factors** facilitating CB's **adoption**: Trialability and incentives to enable cargo bike's cultural development, such as training, free testing and subsidies, proved effective in increasing CB's culture.
- **Limitations and future research:** people aged between 30 and 45, with higher education qualifications, full-time employees, and with children as a standard CB profile. Gender disparities among users: on the professional side, 77% are men; on the mobility side, 58% are women. CB mixed profiles' potential unresearched.

RESULTS

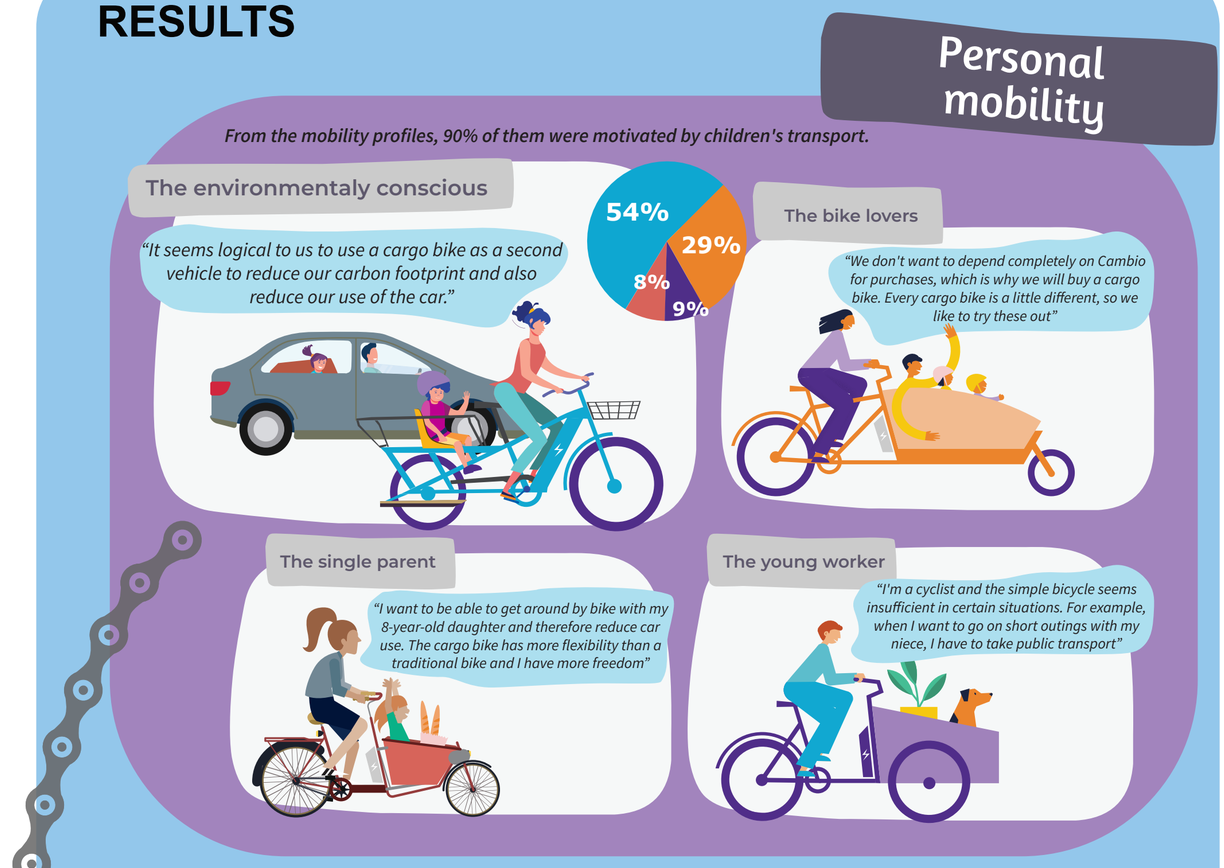

Figure 3: Cargo Bike Profiles identified with quotes from the CAIRGO BIKE project participants (profiles designed using assets from Freepik.com)

DISCUSSION

How to make cargo bike's more inclusive to achieve its full potential?
Any type of cargo bike users missing?
Why do we see gender differences among the CB profiles and domains?

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Let's connect!
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